

AMERICAN GAS ASSOCIATION



MAY
1960



Why so many Birmingham schools heat with **LO-BLAST GAS burners**

"With the style of architecture we want here in Birmingham, we find that it's more practical to have small gas-fired boilers in each school building rather than build a central plant and pipe heat to each building," says Mr. Fred J. Kelley, Business Manager of the City Board of Education.

"That's one of the reasons why we specified Lo-Blast Power Gas burners for many of our new schools. These units adapt most easily to the boilers we use. What's more, they have a very good record here in Birmingham for safe, consistent performance plus low-cost installation and operation."

Gas heating can give your schools safe, economical service—especially with the new Lo-Blast burners made by Mid-Continent Metal Products. For complete information, check with your local gas company's Heating Specialist, or write Mid-Continent Metal Products Co., 1960 N. Clybourn Ave., Chicago 14, Illinois.

AMERICAN GAS ASSOCIATION

Economite and Lo-Blast Power Gas Burners operate silently, cost less to install, are well suited for down-draft boilers, and are available in capacities from 70,000 to 20,000,000 BTU.

**FOR HEATING
GAS IS GOOD BUSINESS!**





Mrs. America (Margaret Priebe) graces a "Suddenly It's Spring" State Fair exhibit by Citizens Gas and Coke Utility, Indiana

AMONG an editor's problems (there are many) is that of obtaining the right kinds and amount of material each month to make up a magazine of a certain average size. Usually there is either a dearth of good material, necessitating strenuous efforts to create worthwhile features, or else a flood of submissions and ideas, all good, leading to even more frantic efforts to find time to prepare them and space to accommodate them. Thus, an editor's life is one of feast or famine. . . . This month, obviously, is one of the feast times. . . . So many excellent feature subjects turned up that we won't attempt to mention here more than a few. . . . For example, the lead article, beginning on page 2, actually covers two subjects of top gas industry importance, each of which would make a lead article by itself. . . . And the four-color center insert on the coming A. G. A. Convention in Atlantic City. Members may wish to retain this as a handy leaflet by simply pulling it out of the book. . . . Southern California and Southern Counties' "animal ad zoo" (see page 8) is something for both executives and the kids at home to read . . . and both hard-headed executives and their wives may enjoy the New Freedom Kitchen promotion story (page 19). . . . There's also a big industry news section this month, for those who like to keep up on other companies (see page 43).

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PAR Director S. F. Wikstrom,
agency V.P. Tom Lane, and
producer Norman Jewison
greet star, Eddie Hodges



TV Spectacular to Launch New GAS Refrigerator

June 23, 1960, will be a date to remember in the gas industry.

At 10:00 p.m. EDT, that Thursday evening, will be combined two history-making events. One will be the presentation of the hour-long CBS network television spectacular, "The Secret World of Eddie Hodges." Sponsored by A. G. A. in cooperation with the Whirlpool Corporation, the spectacular represents the most ambitious gas industry television effort to date.

The other, for which the spectacular provides the occasion, will be the introduction, during the commercial segments of the show, of the all-new RCA Whirlpool gas refrigerator.

The refrigerator, developed at a cost of \$20 million, the largest financial investment ever made on a single gas appliance, embodies a completely new design and features radical improvements making it highly competitive with the best refrigerators of other types on the market.

Because of the enthusiasm and financial support which were brought to bear on its development, the new gas refrigerator was completed and put into production a full year ahead of the originally-contemplated schedule.

The television spectacular which will provide the vehicle for introducing the new appliance to the public is expected to draw a huge coast-to-coast audience.

Local gas companies are being provided by the Whirlpool Corporation with complete promotion, advertising and publicity materials for building anticipated viewership to a maximum.

Immediately following the show, the new RCA Whirlpool gas refrigerators will go on sale in gas company and dealer showrooms throughout the country, supported by a continuing schedule of national and local advertising and promotions designed to consolidate the impact of the June 23 spectacular.

"The Secret World of Eddie Hodges" will be a major entertainment event, not only because of its glittering cast, but for the universality of its appeal.

Starring one of the most talented young performers in show business today, it is the story of the dreams and aspirations of a freckle-faced American boy.

A natural choice for the part, Eddie Hodges created the role of a little boy in the Broadway hit, "The Music Man," recently appeared with Frank Sinatra in the movie "Hole in the Head," and will play the title role in one of the major motion pictures of the year, to be released in June—"The Adventures of Huckleberry Finn."

Supporting Eddie Hodges will be Jackie Gleason as narrator, Hugh O'Brian as Wyatt Earp, Boris Karloff as Captain Hook, comedian Bert Lahr, and actress Janis Paige, besides dozens of other talented players, singers and dancers.

The format of the show provides an ideal entertainment vehicle—a small boy's grand and imaginative daydreams suddenly brought to life—with the boy himself, of course, as hero.

In the course of these "dreams-for-real" viewers will be able to share Eddie Hodges' adventures as he poles a raft down the Mississippi as Huck Finn, does an old-time vaudeville song-and-dance, cleans up a Western town with a gun-slinging marshal, confronts the villainous Captain Hook, and engages in numerous and varied other exploits.

Eddie Hodges also will star in one of the main commercials introducing the gas refrigerator.

In the scene, which will be integrated with the show, Eddie Hodges sells lemonade at a home-made stand. Eddie quickly becomes a tycoon in the lemonade field, because of his inexhaustible source of ice cubes—the automatic IceMagic ice maker on his RCA Whirlpool gas refrigerator.

Other commercials to be shown during the show feature Julia Meade. One will show her in a surrealistic "dream kitchen," with a real gas refrigerator. Another will feature the theme "Number One," and will enumerate the several technical "firsts" appearing in the RCA Whirlpool refrigerator. A fourth commercial will show the new refrigerator as part of RCA Whirlpool's Miracle Gas Kitchen of Tomorrow.

Among the refrigerator's features are: IceMagic or lever-action automatic ice makers; frost-free operation in both food and freezer compartments; an air-conditioned meat chest; the Jet Cold Shelf, a hollow glass shelf through which passes a current of cold air for quick chilling of desserts and beverages; glide-out shelves, and a "million-magnet" door gasket for positive sealing.

The refrigerator has more than 13 cubic feet of storage capacity, yet is smaller than previous 11-cubic foot models, thanks to its thin-wall urethane-foam insulation.

Cabinet styling is smart and completely modern.

An advance statement by Whirlpool announced three models of the new gas refrigerators. According to the announcement, "the new refrigerators, introduced after less than two years of intensive development, represent some startling and basic improvements.

"The absorption system weight has been reduced 50 per cent and the number of welds 30 per cent," the announcement said. "The new units consume less gas than predecessors and are so constructed that warm air is exhausted at the base of the refrigerator instead of out the top rear. As a result, they may be installed with only four inches clearance between the top and ceiling or wall cabinets. No clearance is required on sides and at back."

A special ceremony was held in April at Evansville, Indiana, site of the factory, to commemorate Whirlpool's achievement in producing the new gas appliance a full year ahead of schedule.

As part of the ceremony, Whirlpool's chairman of the board, Elisha Gray, presented Wister H. Ligon, president of A. G. A., with one of the first models of the new top-of-the-line refrigerator.

In accepting the gift for A. G. A., Mr. Ligon said:

"Appearance of the new RCA Whirlpool gas refrigerator in the appliance show rooms of gas utility companies throughout the nation, which is scheduled for June, will mark one of the most significant boosts to gas appliance sales in many years."

"The gas industry is indebted to Whirlpool for the courage, long range attitude, and investments of money, research, and materials which brought about this achievement."

Member companies are being urged to support vigorously both the promotion of the June 23 television broadcast, and sales promotions of the new refrigerator.

Details on promotional plans and materials are being provided to utilities and dealers across the country through a full schedule of sales meetings and other means. For further information, members may contact the sales department of the Whirlpool Corporation, St. Joseph, Michigan, or the A. G. A. Promotion Bureau at New York headquarters.



In "The Secret World of Eddie Hodges," Eddie's companions include Hugh O'Brian as Wyatt Earp, Bert Lahr, Boris Karloff as Captain Hook, and actress Janis Paige

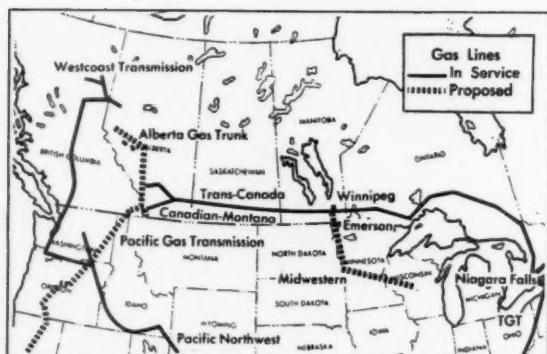


Julia Meade, above, will present the new gas refrigerator. Below, Whirlpool Chairman Elisha Gray, left, presents a refrigerator to A. G. A. President Wister Ligon, right, at special ceremony





Trans-Canada pipeline, left, moves across Saskatchewan. Above, welders ignore biting —48° cold to complete work



Vast Canadian reserves freed for U.S. export

Huge new supplies of Canadian gas are to begin moving into U. S. mains.

The Canadian government turned a legal valve releasing vast reserves for U. S. use when it accepted in April a National Energy Board recommendation for approval of four major Canadian export proposals.

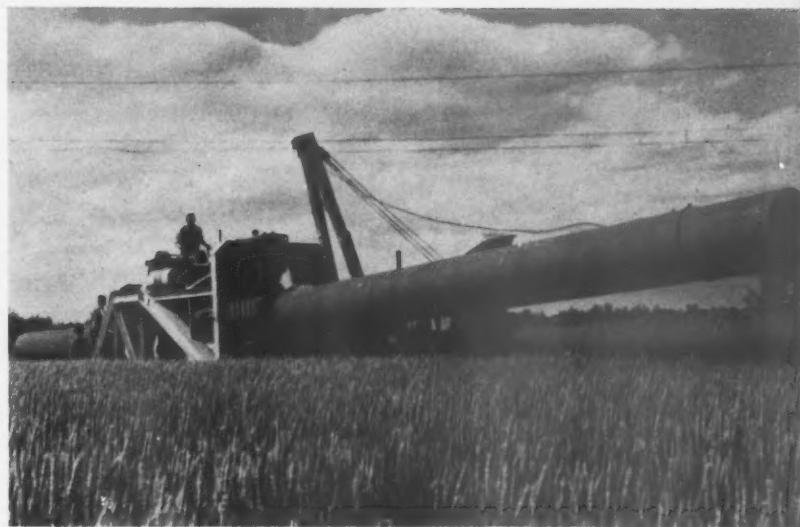
The decision will swell U. S. supplies by an estimated billion cubic feet per day or more of gas, as soon as necessary new pipeline construction can be completed. Some deliveries are expected to begin this year, the remainder in 1961.

Pipeline, processing and drilling projects to supply the export gas, for which plans have been kept simmering pending the decision, will represent an investment of more than \$1 billion. Revenue from the exports is expected to top \$75 million annually in three years, a long step toward correcting Canada's annual trade deficit with the U. S.

The action was announced in the Canadian House of Commons on April 1 by Trade Minister Gordon Churchill. Mr. Churchill's statement affirmed the Energy Board's finding that the export applications were in the Canadian pub-



Left, diamond-hard granite falls to halt pipeliners as they cross northeastern Ontario. Below, pipeliners work alongside Manitoba wheat farmers



lic interest and were backed by sufficient gas reserves to satisfy both domestic and export requirements over the next 30 years. The 30-year period is, of course, a minimum.

The new pipelines, which will be in addition to Westcoast Transmission Company's presently operating line to the Pacific Northwest from the Peace River fields in British Columbia, will deliver Canadian gas to the U. S. market at points in Idaho, Montana, Wisconsin, and at Niagara Falls.

The U. S. Federal Power Commission already has granted authority to Midwestern Gas Transmission Company to move 204 million cubic feet of gas per day, which will be delivered by Trans-Canada Pipe Lines, Ltd., through a 2,300-mile pipeline across Canada from Manitoba.

The other three projects are expected to receive FPC approval in due course.

In the most ambitious of the proposals, Alberta and Southern Gas Company, Ltd., will deliver 459 million cubic feet a day in Northern Idaho, to supply California markets of its parent, Pacific Gas and Electric Company.

Westcoast Transmission Company,

Ltd., received authority to move an additional 152 million cubic feet a day to El Paso Natural Gas Company.

Canadian-Montana Pipe Line Company, Ltd., will buy gas from Alberta and Southern, and deliver it at Grand Falls, Montana, to its parent, Montana Power Company, at a rate of 36 million cubic feet a day.

The Canadian government also gave Trans-Canada authority to move an additional 204 million cubic feet a day to Tennessee Gas Transmission Company, at Niagara Falls, on an interruptible basis.

Rejected was one application, by Niagara Gas Transmission, Ltd., to deliver 16.7 million cubic feet a day into New York State. The Energy Board turned the proposal down on the ground prices were too low to repay investment.

Major import of the Canadian decision to the U. S. gas industry is its augmentation of reserves available for the U. S. Future gas supply may now be computed in terms of North America, rather than of the U. S. only.

Consumers, also, stand to benefit as new supplies ease pressure on costs and prices.

The decision, of course, was greeted with jubilation in Canada.

Speaking for the more than 600 members of the Canadian gas industry, W. H. Dalton, managing director of the Canadian Gas Association, said:

"The decision of the NEB to export Canadian natural gas to the United States will bolster Canada's economy more than any other single factor in the last decade."

Pointing out that NEB's nod of approval was virtually expected by all segments of the industry after the massive array of evidence had confirmed Canada's huge reserves of natural gas, Dalton stated that it was a conservative estimate that approval would now touch off a \$1 billion total financing program in terms of pipelines, well drilling, and processing plants.

"The gas industry has already proved itself a big spender," Dalton said. "It has invested about \$1.4 billion in Canada—\$800 million in gas transmission and gathering lines; \$100 million in gas processing plants; \$250 million in gas distribution systems and \$250 million in exploration and development.

(Continued on page 41)

Eastern, Mid-Western sales conferences this month

The A. G. A. Eastern Gas Sales Conference is being held this month at the Shoreham Hotel, Washington, D. C. Dates are May 12 and 13.

A new and different type of program is offered this year, featuring workshops and talks covering opportunities and developments of the coming decade.

Top gas company salesmen and executives from the East Central region are expected to gain many new pointers on salesmanship for the future.

An outline of the program is as follows:

Thursday, May 12

Opening Remarks & Greetings—W. J. Miners, residential sales manager, New Jersey Natural Gas Co., Asbury Park, N. J., chairman.

Keynote Address: "What ARE We Waiting For?"—Donald S. Bittinger, president, Washington Gas Light Co., Washington, D. C.

Inspirational Sales Talk: "Showmanship in This New Business ERA"—

Zenn Kaufman, sales consultant, New York, N. Y.

Workshops for the Future

Conference Luncheon

Film: "Herman Holds a Sales Meeting."

Workshop Critique: "Highlights for the Future"—J. Richard Kelso, sales manager, Hope Natural Gas Co., Clarksburg, W. Va.

Workshops

Heating Workshop for the Future: "Let's Put the Heat on Competition"—R. L. Leusch, Peoples Natural Gas Co., Pittsburgh, Pa.; J. C. Murtha, Consolidated Edison Co. of N. Y. Inc., N. Y.

Laundry Workshop for the Future: "Wash the Competition Out of Your Hair"—Geo. W. Coulter, The Manufacturers Light & Heat Co., Pittsburgh, Pa.; W. J. Miners, New Jersey Natural Gas Co., Asbury Park, N. J.

Air Conditioning Workshop for the Future: "We're Sure to Be Real 'Cool'"

M. Pierce, The Ohio Fuel Gas Co., Columbus, Ohio; H. F. Carr, Baltimore Gas & Electric Co., Baltimore, Md.

Range Workshop for the Future: "The Gold Stars Will Be in Your Eyes"

—J. S. McElwain, The East Ohio Gas Co., Cleveland, Ohio; E. A. Kelsey, The Berkshire Gas Co., Pittsfield, Mass.

Friday, May 13

Opening remarks: J. Richard Kelso, sales promotion manager, Hope Natural Gas Co., Clarksburg, W. Va., chairman.

"Workshop of the Giants"—Christy Payne, Jr., manager, market development, Consolidated Natural Gas System, Pittsburgh, Pa., moderator; Robert K. Eskew, Air Conditioning & sales vice president, Arkla Air Cond. Corp., Evansville, Ind.; Harold P. Bull, vice president, gas refrigeration, Norge Sales Corp., Chicago, Ill.; Jack D. Sparks, vice president, marketing, Whirlpool Corp., St. Joseph, Mich.

(Continued on page 40)

Meet your Association staff



Paul Inskeep

The Great Depression of the thirties changed the career of many an aspiring young businessman. For some, change was gain. In the case of Paul Inskeep, depression experi-

ence in the gas industry keynoted a career that led to the Midwest Regional Managership of A. G. A. in 1956. It has assuredly been the Association's gain.

Paul's earliest business experience was with a Midwestern utility as a salesman of washing machines. He soon attained the position of appliance manager of the firm. However, a well-known manufacturer of vacuum cleaners was one eager salesman to the good after Paul noticed one day at the cashier's window of his bank that vacuum cleaner salesmen were drawing larger checks than he was. He joined the vacuum cleaner manufacturer as crew manager and progressed through various promotions to division manager with the organization.

The depression years found him contacting dealers for a national producer of liquefied petroleum gas. It was during the course of his work for this company that his interest in the gas industry grew. In 1939, he joined the Detroit Michigan Stove Company and became well-acquainted with A. G. A. through service on many of its committees.

In those busy years, with his career accelerating, Paul managed to serve as a director of the National Association of Food Appliance Manufacturers and as chairman of the Gas Division Committee of the National Sanitation Foundation. He even took a turn at the typewriter, producing several articles on gas appliances for trade magazines.

Now as regional manager for A. G. A. of a full dozen states, Paul is as much as ever a man on the go. He has even had to find a pocket-size hobby that will suit the pace he keeps. Recently he replaced the club that once made a hole-in-one at the Wequetonsing Country Club with a Minox camera, which has proved a much better traveler.

Paul and his wife, Helena, live in Grosse Pointe, Mich. He is a member of the Detroit Yacht Club, the Guild of Ancient Suppliers, the Grosse Pointe War Memorial Association, and A. G. A.'s Hall of Flame. Since the Inskeeps' only daughter married last year, Paul says, their home has been dominated by a rather bossy French poodle and a Persian cat named Bill.

'Gas around the globe' is top display



"Unga ug uba" is a common phrase in Africa. It means "gas is best," naturally, especially for water heating



"Haru Aki Natsu" means gas is best in Japan, too, especially for dryers to keep delicate silk kimonos fresh



"Gaz est le meilleur" is a French phrase explaining one reason why French cooking also is the best in the world

An imaginative and beautiful display on the theme of "Gas is Best Around the World" brought Michigan Consolidated Gas Company the top award for the best exhibit in Detroit's 1960 Builders Home and Flower Show.

Graceful figures in enchanting settings drew some 200,000 visitors who were whisked from continent to continent as they strolled through the unique display of gas appliances.

The exhibit was designed by the company's display department and approved by Fred A. Kaiser, vice president and general sales manager, who had charge of the program. The Public Relations department found its value great, and it was featured in all of the daily newspapers.

Crowd attractions were a miniature pink Eiffel Tower, a French gendarme, a British Grenadier, Japanese, African and Latin-American half life-sized figures made of fiberglass, papier-mache and porcelain.

The French section of the display was created in recognition of France's fashionable restaurants and the worldwide reputation of French cooking ability.

The British exhibit, Kaiser said, was designed as a tribute to English pioneers in modern cooking and food preparation.

Italian and Greek exhibits were a tribute to the popularity of their

(Continued on page 52)

SCRUBBED SO CLEAN

Modern gas, too, is washed and dried before it comes into your home. Giant "scrubbers" located along our pipeline system remove any foreign substance, take out all moisture, leave the gas dry and ready to burn. Next time you turn on your automatic gas range notice the friendly flame. It's blue and burns clean. Just one of many good reasons why 85 out of 100 new home owners prefer to cook with modern gas.

Gas is your household bargain. Almost everything you buy costs more than gas does. But gas continues to cost less than competing fuels and services.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY - SOUTHERN COUNTIES GAS COMPANY

AVOIDING THE CHILL

Gee whiz, it was cold here last month! And when the temperature goes down, you use more gas. In fact, the typical Southern California home used 4½ times as much gas in January as it did last August (and from 30% to 50% more than a year ago). But thanks to quantity rates, the more you use the less you pay for additional gas. So if you, too, used 4½ times as much last month, notice that your bill was up less than 3 times. Actually, gas rates here are among the lowest in the nation. Even in topcoat weather isn't it great to live in Southern California!

Gas is your household bargain. Practically everything you buy nowadays costs more. But gas continues to cost less than competing fuels and services.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY - SOUTHERN COUNTIES GAS COMPANY

TRAVELS SO FAR...

Soon some of the gas you'll use to cook your breakfast will come all the way from Alberta, Canada. Up there they've got big rivers, virgin forests, and gas fields that are among the richest in the world. So we went up north and bought Canadian gas to meet Southern California's booming demands. A 1900-mile pipeline soon will be completed to bring it here. So some moonlit night when the wind is right—listen! Maybe you'll hear the call of the Canadian moose.

Gas is your household bargain. Practically everything you buy costs more than gas does. But gas continues to cost less than competing fuels and services.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY - SOUTHERN COUNTIES GAS COMPANY

Animals make 'news zoo' with smash PRformance

The public utilities fraternity has been watching a select group of animals create one of the most intriguing public relations advertising campaigns in recent years. Southern California Gas and Southern Counties Gas Companies are sponsors and keepers of the novel "PR Zoo."

The birth of this unusual ad menagerie answered these problems common to large companies:

How to make the pedestrian subject of daily operations newsworthy and interesting.

How to explain that the company is a civic leader in the community, solving many financial and technical problems for the benefit of its customers.

Are you talking to a Gas Company? Don't be surprised if his pocket suddenly goes. Many of our people away from the new carry tiny radio receivers. They just 6 ounces, yet are powerful enough to send messages within a 3000-square-mile radius in action! Sound like buck stuff? Maybe. But we wanted you to know, or will get, whatever it takes to make sure you keep on receiving the most up-to-date gas service in the whole wide world.

Gas is your household budget. For example, rising taxes, wages, and materials, gas rates have gone up only 10% recently and remains the lowest rate of competing fuels and services.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY

If you've had your ear to the ground lately, maybe you've heard some unusual sounds. Don't be surprised for a minute. It could be one of our crewmen laying a gas line underground. Wherever practicable we now work this way to save time and avoid open trenches. A special cutting tool armed with a water jet turns the trick. As the tool burrows, the water clears the hole. Then it's a cinch to push the pipe through. Uphill or downhill under driveways or streets, we can tunnel the length of a football field in 35 minutes and come up exactly on the goal line. Neat work, eh? Another example of how we go about delivering the most efficient gas service in the country.

Gas is your household budget. For example, rising taxes, wages, and materials, gas rates have gone up only 10% recently and remains the lowest rate of competing fuels and services.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY

Have you ever noticed? Some people, as some pets, just naturally do things with tender care. For instance, when your Gas Company serviceman digs into a lawn to check the service line, he takes time to replace the sod and tamp it down. When he kneels on a clean kitchen floor to adjust an appliance, he first puts down a clean cloth. If you ever have reason to call him, take notice. Gas Company service is delivered to you free, and very carefully.

Gas is your household budget. The cost of living is up over 100%, but your average gas rate is up only about 50%.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY - SOUTHERN COUNTIES GAS COMPANY

Let's keep it a secret from our friends back east, but it can get pretty chilly on a winter day in Southern California. Demand for gas jumps as much as 7 times over in a matter of hours. This means we need huge reserves close at hand. We have them because we pipe in Texas gas every day of the year, storing the excess in depleted oil fields during the summertime. By running our pipelines at capacity all year 'round, we buy gas a little cheaper for you and see to it that there's always plenty, even on coldest days.

Gas is your household budget. A new home costs, for example, over \$10,000 to \$12,000 during the off peak time of the month by letting gas do the heating, cooking, laundry, refrigerating, drying, water heating.

YOUR GAS COMPANY
SOUTHERN CALIFORNIA GAS COMPANY

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ITHLY

How to say that the company is a good place to work, the esprit de corps high.

How to show that advancements in modern research are helping to create new and better things for utility customers.

And all with a light touch . . . believability without bombast.

It was the desire of both companies, and of McCann-Erickson, their advertising agency, to achieve a fresh treatment of basic PR subjects. The result, the Animal Series, is an example of close cooperation between client and agency. Public Relations Director Frank Sullivan and Advertising Manager Jack Spaulding represented Southern

California Gas Company. Public Relations Director James MacFarland and Advertising Manager Donald Robertson represented Southern Counties Gas Company. McCann-Erickson Account Supervisor Harry Burton headed up the agency team which includes Donald Jordan, creative director, John Feeley, art director, and Bill Bateman, copy group head.

The Animal Series originated as a result of teamwork. Key people from the two gas companies were invited to meet with representatives of the advertising agency in a "wildcat session." Its purpose: to develop ideas for interesting PR ads. In a one-hour session, 175 usable ideas were tape re-

corded for copy development.

Once supplied with the list of subjects, McCann-Erickson, working closely with the PR and advertising departments of the gas companies, developed the best of them in terms of PR ads.

At the outset, it was decided that in addition to telling a pure public relations story, the new campaign should have a secondary purpose: To build a friendly image for the gas industry in Southern California. It was decided that instead of using photographs of expensive equipment or drawings of pipelines crossing mountainous terrain, an illustrative device more con-

(Continued on page 38)



Travel trailer is modern home on the range, with gas range and other gas appliances providing carefree comfort for wanderers



Life rolls merrily for moppet and mother in mobile home with an A. G. A.-approved Dixie gas range.

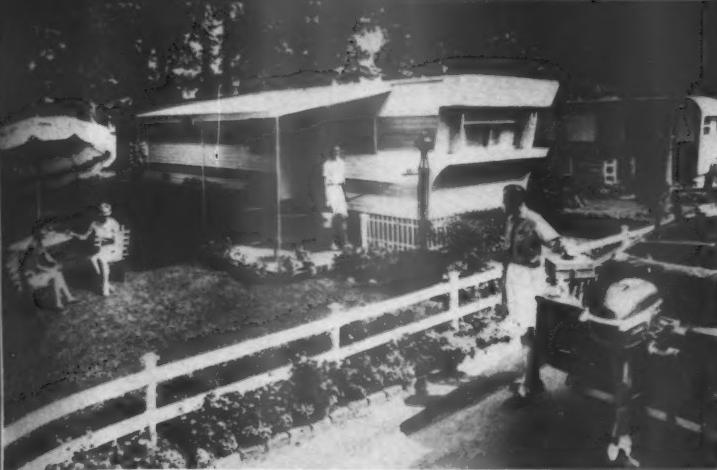
Because of mushrooming growth in new mobile home market for gas appliances, A.G.A. adopts special approval requirements program

Blue Seal goes a-roving: gas appliances on the go

Over the past few years, a new mode of life has emerged in America—life on wheels.

Trailer parks have sprung up as swiftly in many parts of the country as have suburban developments near our growing cities. As the ranks of trailer dwellers have been swelled by retired people, service families and defense workers, the new villages on wheels have added new conveniences and even luxuries, helping to establish them as a fixed and comfortable way of living. In many cases, "mobile homes," as these new trailer-park residences are now called, have been upgraded from wayside shelters into movable mansions up to 60 feet in length.

As a measure of the trailer trend, reliable statistics indicate that in 1959 approximately 12 per cent of all homes built and sold in the U. S. were mobile homes, while in 1960 the figure is ex-



Nearly a million and a half mobile homes in the United States provide a new way of life for three and a half million people



Luxuriousness of mobile homes can equal that of city dwellings



Trailer may have gas range, oven and refrigerator, as this one does, plus gas water heater, gas dryer and gas furnace

pected to reach 16 per cent!

According to the Mobile Homes Manufacturers Association, 73 per cent of these units are designed as permanent or semi-permanent housing, 23 per cent for vacation or weekend travel, and the remainder for special uses (field offices, libraries, showrooms, banks, music schools, laboratories).

Mobile home sales in 1959 totalled 149,000, at a cost of nearly \$700 million.

The MHMA estimates that today more than 3,500,000 Americans live in approximately 1,400,000 mobile homes.

The importance of these statistics to the gas industry lies in the fact that practically all trailers and mobile homes currently are equipped with one or more gas appliances. Included are gas ranges, in nearly 100 per cent saturation, followed closely by gas furnaces and gas water heaters. Other gas appliances fre-

quently installed are gas refrigerators and clothes dryers, for which the mobile home market offers a further potential.

(For a new five-year forecast of the total potential market for gas appliances, including the mobile home market, see page 21.)

Most mobile homes are equipped to operate appliances on either LP-Gas or natural gas. Many modern trailer parks are connected to local utility mains from which the mobile homes are supplied with natural gas.

In recognition of this burgeoning new appliance market, A. G. A. recently acted to set up approval requirements especially for appliances to be installed in mobile homes and trailer coaches.

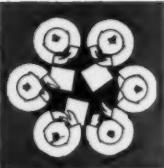
In March, the Mobile Homes Manufacturers Association announced that it also had adopted a "blue book" of standards which its members are being required to meet. For gas appliances,

approval by a nationally recognized testing laboratory, such as the A. G. A. Laboratories, will be mandatory.

A. G. A. approval requirements for trailer-home appliances now cover domestic ranges, built-in cooking units, water heaters, forced air furnaces, floor furnaces and recessed heaters. Currently under consideration are approval requirements for clothes dryers, refrigerators and room heaters.

Need for the A. G. A. action is expressed in a Laboratories statement: "The necessity for such requirements has become evident by a steady increase in usage of gas appliances in mobile homes and trailer coaches over the past decade due to the rapid growth of the mobile home industry. In addition, several codes in different areas of the country specify that appliances to be installed in trailer coaches shall be specifically ap-

(Continued on page 40)



Industrial relations round table

Prepared by
A. G. A. Personnel Committee

Edited by **W. T. Simmons**

Assistant Personnel Manager
Philadelphia Electric Co.

● This man is going places!—In the issue of *Supervisory Management* for November, 1959, Gordon Hanes states that a man with the following qualities shows the leadership that will produce results for his company and help him advance to a better job: (1) dissatisfaction—because it will inspire him to look for better ways of doing things, (2) ideas—because, being close to the operation, he is best equipped to originate ideas and improvements, (3) courage to make mistakes—because progress takes willingness to experiment; and no trial is entirely without risk, (4) disagreement—because yes men don't get things done, (5) information—because a good manager knows the people in his department and knows how to feed information to higher management, (6) firmness—because employees respect a man who sticks to his guns, (7) fairness—because people don't respond to a boss who plays favorites, (8) consistency—because a superior needs to be firm and fair, not just when he feels like it, but all the time, (9) moral conviction—because a leader can expect his example to be followed.

● Trouble, trouble—if you're living, you've got problems. You're tense. You're harassed by psychological stresses and strains. It is a fact of modern life, according to William C. Menninger of the famous Menninger Foundation at Topeka, Kans.

Some of the tensions are internal and unconscious, hidden even from ourselves. Others are external and have to do with our environment. We can share these external tensions with others. In fact, learning to live and share with others is one of the best ways to reduce tension and make changes for the better in our environment.

Says Dr. Menninger, "To modify the environment, just as to modify our own selves, takes action. It means doing at least three specific things.

"1. Examine and evaluate and talk about possible causes of tensions. It has often been said that a clear understanding of a problem is 90 per cent of its solution. This is a proven fact in resolving conflicts within the individual personality, and this can apply also in a family, company, neighborhood, city, state, or nation.

"2. Assume full responsibility as a person, as a member of a family, as a worker on the job, as a participating citizen. This means acquiring basic education, training, and experience and continually working

for better solutions of the problems of groups in which we find ourselves.

"3. Plan for the future with care. Such planning has economic, social, educational, and vocational aspects. Important in this is to discover the job that's best suited to one's abilities and opportunities; then relieve the routine and responsibility of the job with an avocation or hobby. Often recreation can serve for re-creation."

● How to beat fatigue—In the issue of *Think* (IBM) for October, 1959, John E. Gibson states that fatigue is one of man's worst enemies. Yet scientists today point out that most fatigue is unnecessary and avoidable. He also indicates that, generally speaking, there are three kinds of fatigue. They are:

1. Physical fatigue. Caused by muscular activity, this is the quickest and easiest to cope with, for physical energy is easily replenished and does not tend to accumulate as do other forms of fatigue. The best cure is a cold shower. Incidentally, work performed rhythmically consumes less energy.

2. Mental fatigue. The man who works with his brain requires twice as much sleep as the man who works with his brawn. Further, mental fatigue is cumulative; too little sleep not only effects efficiency, but also increases the rate of fatigue. Eight hours of sleep, a workroom temperature of 68 to 70 degrees, and a plentiful supply of oxygen are musts for avoiding unnecessary mental fatigue.

3. Nervous fatigue. This is the commonest form of tiredness and is caused by anxiety, frustration, boredom, or a state of mind that drains energy faster than the body can replenish it. Vigorous exercise provides the best release for pent-up tensions. Keeping busy can also prevent emotions from sapping energy. A half hour of acute boredom can burn up more nervous energy than a whole day's work.

● Putting purpose into your life—John S. Bonnell in the January issue of *Pageant* inquires into why so many people fail to catch hold of the abundant and happy life. He said one reason is that they lack purpose. As Voltaire put it, they are like an oven that is always heating but is never cooking anything. A second reason for failure Mr. Bonnell states is that too many people lack the ability to see life through to the end. They lack staying power. At the first taste of success they begin to slow down, to turn aside, to falter. The third reason for failure is that they make no genuine effort to correct their faults.

The most difficult task in the world is for the average human being to look objectively at himself, but it is an essential task in development. Mr. Bonnell suggests that it can be made easier by remembering these five steppingstones to self-improvement: (1) We should be willing to admit weaknesses

in character as readily as we admit strengths. (2) We shall become more patient in bearing the faults of others when we realize that our faults must be borne by others. (3) We shall understand others better if we try to see each problem from the other person's viewpoint. (4) We shall discover that the highest wisdom is "Know thyself and God." (5) We shall discover that love is a healing and stabilizing force in every human relationship.

● Three keys to executive success—Ernest W. Fair in the May issue of *Distribution Age* states that there is no room for the lone wolf in business today. The executive job is becoming steadily more complicated and more dependent upon the skills and abilities of others. Collaboration is an inescapable fact of business life.

Mr. Fair indicates that being a good collaborator requires action on these three fronts: (1) Get more cooperation from your assistants. Suggestions: Keep them informed. When a problem comes up, give them complete background information. Let them mull it over, talk it over, and clarify their ideas in an atmosphere of relaxed informality. (2) Get more out of your associates. Suggestions: Don't underestimate the ideas of fellow executives. Their perspectives on your problems may be better than your own. Organize your facts and your thinking before the conference, but do not scheme or make bargains beforehand. It is important to realize that company interests come before department interests. (3) Get more out of your superiors. Suggestions: Be prepared for conferences, with the answers to possible questions already resolved in your mind. State your convictions clearly, but do not argue difficult points; explain them. Finally, keep in mind your precise relationship in the discussion. Your superiors expect from you the same collaboration that you expect from your assistants.

● NLRB rulings—Employer's pre-strike poll and wage hike legal, Rothman rules—No Taft Act violation was committed by an employer who, after being told of a union's intention to call a strike because of a contract dispute, polled employees to determine what his replacement needs would be during the walkout. According to an administrative decision by General Counsel Rothman of the National Labor Relations Board, the employer did not act improperly in putting into effect his pre-strike wage proposal to the union.

Because of the impasse reached in negotiations, according to Rothman, the employer did not violate the act by putting into effect a wage increase equal to its last offer to the union. The poll of employees was not an unfair labor practice, since the

(Continued on page 29)

W. R. Stephens, Arkansas Louisiana's president, left, points to newspaper ad which helped to sell 5,300 dryers for ALG. Sharing his enthusiasm is Harold P. Bull, Norge vice president



Dryer campaigns topple records

Outstanding gas dryer promotions by utilities are blazing new merchandising trails and setting new sales records across the country.

For example . . .

Michigan Consolidated Gas Company and its dealers sold 7,963 gas dryers in a seven-week campaign, more than had been sold in the previous eight months, and increased its gas load 80 million cubic feet a year.

Arkansas Louisiana Gas Company, in an eight-week campaign, sold more than 5,300 Norge gas dryers alone on its system.

A "Giant Jack Pot" campaign boosted sales far above previous levels for Southern California and Southern Counties Gas Companies.

Milwaukee Gas Light Company based a successful dryer campaign on a limerick contest tied-in with the A. G. A. "Fluffy-the-Kitten" displays.

Elizabethtown Gas Co., New Jersey, pioneered a new laundry rental program designed to introduce hundreds of new users to the advantages of gas. Almost 500 dryers were sold in Elizabethtown in a 20-day campaign.

Here are some of the techniques the gas companies reported they used to push their dryer sales campaigns to unprecedented success:

Arkansas Louisiana's all-out campaign, held in February and March of this year, resulted in the sale of 5,341 gas dryers over ALG's three-state sys-

tem, in Evansville, Ind., home of Arkla Air Conditioning Corp., a wholly-owned subsidiary, and in Fort Smith, Ark., where Fort Smith Gas Corp. staged a similar drive.

The successful campaign indicates two facts, according to W. R. Stephens of Little Rock, president and chairman of the board of ALG:

1. The effectiveness of cooperative effort by appliance dealers and the gas company in ALG's service area.

2. The success which can be achieved when every employee of a utility joins in a selling effort.

Mr. Stephens said principal credit for the high volume of sales was given to the gas company's "every-employee-a-salesman" program. Each of the 3,000 employees of the gas company and its eight wholly-owned subsidiaries participated actively in the sale of gas dryers during the campaign.

Other appliances up

Although figures are not yet available, many dealers over the ALG system reported a significant increase in the sale of other gas dryers, such as Maytag and Whirlpool, in conjunction with ALG's Norge campaign.

Dealers also reported a noticeable increase in the sale of washing machines, as the sale of gas dryers picked up steam during the campaign.

The over-all effect of the promotion of gas dryers, coupled with two

months of cold, rainy weather, tended to make customers on ALG's system "clothes-dryer"-conscious, officials of the gas company said.

Approximately 750 appliance dealers on the gas company's system, which includes central and southern Arkansas, northeast Texas and northwest Louisiana, entered upon the campaign to sell the Norge dryers at the bonus price of \$149.50. A coupon worth \$10 on the purchase price of a dryer was available in newspaper ads run over the system and at all ALG offices.

The coupon served as the down payment, thus giving the effect of no down payment and five years to pay in small installments included on monthly gas bills.

Further inducements included a free five-year warranty, lifetime guarantee against rust, free normal installation, free one-year service and free delivery.

Of the 5,341 gas dryers sold, 4,640 were sold on the ALG system, 121 were sold by employees of Arkla Air Conditioning Corp. and 580 were sold by employees of Ft. Smith Gas Corp.

The goal of 5,000 in eight weeks was set by gas company officials after 4,167 dryers were sold in a similar campaign in Milwaukee, Wisconsin.

The sales drive was accompanied by an extensive program of advertising and promotion, including radio, television and newspaper. Other advertis-



Ad cards inside and outside buses, floor displays helped ALG sell Norge dryers. Above, stocks of dryers at ALG's Texarkana distribution office stand by to fill orders



ing was placed on street buses and in point-of-purchase displays for all gas company distribution and sales offices.

The sale was over on April 1, but sales of the popular dryer continue—at its regular price of \$179.95. Signs on Arkansas Louisiana Gas Company display floors now read: "Still a Good Buy at \$179.95."

Michigan Consolidated, in the "Gas Dryer Dividend Days" campaign which sold nearly 8,000 dryers in seven weeks, enlisted suppliers, dealers, dealer-contact men, salesmen and the public in a promotion which used tried-and-true techniques plus a few new ones especially invented.

Advertising and promotion plans were presented to utility, manufacturer and dealer personnel at scheduled kickoff breakfasts. The plans included billboard, newspaper, radio and television advertising, animated displays, decals, banners, streamers, car and truck cards, Blue Flame lapel pins, and bonus plans. A direct mail program was aimed toward specific audiences, such as brides and families with new-born children. Mail-

ing lists were obtained from Vital Statistics records.

Each participating manufacturer was encouraged to enlist a minimum of 50 dealers for the promotion. If this quota was met, the utility provided the dealers with brand-name window banners. These were individually printed for use with two other banners which read "Gas" and "Dryers."

The normal \$5.00 dryer installation charge was not in effect during the campaign, allowing dealers to advertise and promote "Free Installation—Limited Time." The utility absorbed the costs for all "normal" installations.

Dealers advertised a \$10.00 allowance for clotheslines traded in on new gas dryers—and made jump-ropes for orphans from the clotheslines!

Michigan Consolidated Gas paid almost \$8000.00 in incentive commissions, sales contest prize money and awards. The expenditures for advertising and promoting gas dryers helped increase sales of other gas appliances by about 20%. In a "Study of Effectiveness" for the gas dryer promotion, the utility points out that "advertising

monies directed at a specific appliance during a promotion period will result in greater over-all appliance sales."

Milwaukee Gas Light tied together several highly appealing elements to make a successful campaign.

To build interest among the public, the "Fluffy-the-Kitten" limerick contest was advertised through television, radio, newspapers and banners.

Effects of the campaign, in establishing an effective promotional image for gas dryers, were calculated to last far beyond the closing date.

The Southern California-Southern Counties campaign featured dryers by 10 manufacturers, a full promotional program, and free installation for purchasers during the period of the sale.

"Giant Jack Pots" were set up in each division, for sharing among dealer salesmen proportionately to sales. The amount allocated to each Giant Jack Pot was determined on the basis of past

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Research holds key to future



By E. H. SMOKER

President

The United Gas Improvement
Company
Philadelphia, Pennsylvania

(This was the opening address delivered at the A. G. A. Research and Utilization Conference, which began in Cleveland, Ohio, April 19, just as the Monthly was going to press. Full details of the Conference will be carried in the June issue.)

The American Gas Association has conducted research since 1923. To be sure the early excursions were not extensive from the financial viewpoint, but the effort does demonstrate the farsightedness of our predecessors.

With the end of World War II an expanded PAR Program was initiated. Steady increases in the funds raised for research have been forthcoming as the program continued over the years. Some representative research expenditures under PAR were:

1944	\$ 226,000
1954	\$1,006,000
1959	\$1,800,000

Good results were obtained and used in the various branches of our industry. A number of them were in your field of appliance utilization.

In spite of this growth, however, certain questions were raised in 1958. "Is our industry doing as much research as it should be doing?" "Is our effort commensurate with other industries considering that we are fifth in size in the nation in capital investment?" "Is our research impressing the financial community so that adequate funds will be available to us for expansion at reasonable rates?" Discussion of these questions led to the decision to have an outside agency study our efforts, both utilities and manufacturers, as well as the PAR Program.

Proposals for an evaluation of the gas industry's research efforts were solicited from a number of prominent institutions who are specialists in the field. After careful consideration, Battelle Memorial Institute was retained to conduct this study. Industry interviews were held. Data from our own and other competing as well as non-competing industries were obtained. After the background was assembled, careful study and evaluation took place. A report was written and submitted.

This report makes a number of interesting points. It notes that in 1958 our three major competing industries' total research efforts were very extensive, especially in comparison with our own. These figures may be surprising to some of you.

The coal industry spent \$17,000,000 in 1958, the petroleum industry \$245,000,000 and the electric industry \$1,517,000,000. Do not, however, be misled by these amounts. They are given for size only and represent, as I said before,

total expenditures and not the sums which were spent on market areas competitive with gas. The figures which are more important to us are: the coal industry spent in areas directly competitive with gas \$4,000,000, petroleum \$11,000,000 and electric \$42,000,000. Our gas industry was estimated to have spent approximately \$4,800,000, or only slightly more than the coal industry, which many of us, I am sure, think of as an old and sick member of our fuel economy. These figures show that our two most competitive industries, oil and electricity, are spending nearly three and nine times as much as we are on directly competitive research.

The Battelle report makes other points. In essence it said: "The American Gas Association . . . research program, within budgetary limitations, has been sound and imaginative. The research accomplishments have been many and meaningful. On the other hand, to prepare for the new era in gas . . . additional funds must be made available to explore new uses for gas, to provide assurance of continued competitive prices, and to provide in breadth scientific and technical support of the entire industry's future development efforts."

Battelle recommends that . . . "a goal should be established to expand the PAR research effort to \$6,000,000 annually . . . within five years, and that through individual company research, primarily that done by equipment and appliance manufacturers, the Gas Industry . . . should have a 1965 total budget of 14.5 million dollars," and concludes, ". . . through research the opportunities can be made available; their realization depends on management."

The goal to be reached by 1965, triple that now expended, was not aimed to equal our competition's expenditures, but to provide a feasible and realistic program which would provide the necessary foundation for our expanding industry.

As a means for guiding industry research Battelle Memorial Institute suggests our efforts be directed to three major areas: market acquisition and retention, which is the branch covering the work in which most of you are involved; improvement of current operations; and future supplies of gas.

In the market acquisition and retention area it is proposed that research on improvements in present uses for gas

must have, for the next few years by far the greatest attention and funds. A review of the sales of ranges over the last ten years highlights this need. Even sales of water heaters, which are the backbone of our year round load, do not show what we would like to see. The house heating equipment picture which has been so phenomenally bright appears to have a few clouds on the horizon. However, the picture can be improved by diligent development of new ideas and improvement of old appliances. The gas clothes dryer, the deep fat fryer, the smokeless odorless incinerator, are examples of what can be done.

Research on improvements in transmission and distribution operations represent enormous potential savings for the gas industry. Work along these lines represents means by which our industry can keep the delivery costs of its product to the consumer's home at continuing modest levels.

The program of research to make certain that in the future there will be sufficient supplies of fuel gas at a competitive price has already been carried out over quite a few years and has consumed many hundreds of thousands of dollars. It will be expanded as we proceed further, and it will be increasingly costly as any of you who have constructed and operated pilot plants well know.

In addition to these three major areas of inquiry, A. G. A. is paying increasing attention to what is labeled an "awareness program" for lack of a better name. In simple terms this means keeping abreast of current developments in allied research fields always with the idea uppermost as to how new discoveries in these fields can be applied in the gas industry. Atomic energy is a case in point.

Another area is the relationship between heat and electricity. The theory of this relationship has been known for a century but only in recent years have materials been developed which have the necessary properties for possible commercial use. The application of direct generation of electric current from gaseous combustion to practical devices is being intensively studied in many laboratories and A. G. A. is doing its best to keep up to date, without actually spending the large sums of money

to do the experimental work itself.

Where do we stand financially in our growing research program? In 1960 an additional \$700,000 is being collected by the simple expedient of adding 15% to each PAR subscriber's bill. This brings our effort up to the not inconsiderable sum of \$2,500,000. To spend this additional money effectively each of the research committees in developing the 1960 program was especially diligent in reviewing projects continued from previous years to be sure they were being carried forward at optimum speed. In addition, new proposals were sifted and then restudied to make certain that the selected projects were the most appropriate. The major criteria for project selection suggested by Battelle were the degrees to which they would help hold present customers and promote new sales. Filling summer valleys was also emphasized. These suggestions were used as bench marks by which projects were evaluated.

Manufacturer research

Thus far we have touched mainly on the PAR research program. The Battelle report also covers all gas industry research including individual utility company and manufacturer projects. While it recognizes the need for continuing individual utility efforts and proposed more than a three-fold increase in PAR research, it also indicates the need for an even greater increase for appliance manufacturers' research in their own enlightened self interest. The national average for all industry research is in the order of 2% of sales revenue. Some industries, such as aircraft and electrical, spend as much as 6%. Looking at our industry in 1959, it is estimated that \$725,000,000 worth of gas appliances were sold. At this sales level, even 1% amounts to seven and a quarter million dollars which might well have been spent by manufacturers. I don't believe anything like this amount was spent; and whether it is feasible for manufacturers to reach this 1%, or the average 2% level, in the near future is a question each manufacturer will have to determine for himself. More research in this area would certainly seem to be necessary to augment the expanding PAR program for the mutual advantage of all industry segments. In fact I might say significantly greater

effort would appear absolutely necessary to keep up with appliance competition.

Now I suppose many are saying to themselves, "I agree with what you say but what can I do about it?" To answer this question I must mentally segregate the industry into three groups. The first group includes all who work for appliance manufacturing companies and other non-utility organizations which supply the gas industry. To these I say, examine your research expenditures in terms of your sales. Do you measure up to the two percent average figure? If not, try to convince your management that you should explore every possible means to do so for your own self preservation. If you spend more than this percentage let me congratulate you and urge that you keep up the good work.

The second group, and I hope a very small segment of the industry, work for gas utilities which are not PAR members. For these, the path is clear. Get your companies to join the PAR ranks and bear your fair portion of the cost of the industry research program which is designed to help you.

The third, and probably the largest group work for utilities which are PAR members. These have noted the 15% increase in the PAR dues formula for 1960 to pay for the \$700,000 additional research appropriation. They also realize that we have a long way to go in fund raising before we reach the Battelle \$6,000,000 PAR goal set for 1965. PAR has a committee which is currently trying to determine the most equitable way in which this sum can be raised. If this committee's report is approved by PAR and is submitted to the industry as a whole for acceptance, this group can be very helpful if it will use its influence to put the program across to management. Without substantially complete industry acceptance the long-range research goals cannot be met, so it is essential that each of us shoulder our share of the burden.

A virile, aggressive industry looks ahead, not behind. We cannot stand idle and hope that our own past inertia and the efforts of the other fellow are going to provide the bright future to which we all look forward. We have to convince our company managements of the soundness of investing in the adage "Today's Research Pays Tomorrow's Dividends."

**ESTIMATED U. S. GAS HOUSEHEATING CUSTOMERS,
END OF 1959, BY STATE**

(Thousands of Customers)

United States	Existing Residential Customers November 30, 1959		Estimated Number of Gas Installations During December, 1959	Estimated Gas Househeating Customers December 31, 1959	Potential Residential Househeating Customers ^a
	Total	Househeating			
United States	29,974	19,986	176	20,162	24,836
New England	1,532	364	4	368	804
Connecticut	354	72	1	73	269
Maine	33	6	b	6	9
Massachusetts	944	232	3	235	420
New Hampshire	36	7	b	7	18
Rhode Island	149	47	b	47	88
Vermont	16	b	b	b	b
Middle Atlantic	7,010	2,302	18	2,320	4,510
New Jersey	1,352	335	4	339	1,157
New York	3,649	875	7	882	1,717
Pennsylvania	2,009	1,092	7	1,099	1,636
East North Central	6,712	4,159	71	4,230	5,388
Illinois	2,106	971	32	1,003	1,533
Indiana	703	298	8	306	457
Michigan	1,386	912	10	922	1,170
Ohio	2,012	1,757	17	1,774	1,857
Wisconsin	505	221	4	225	371
West North Central	2,308	1,882	18	1,900	2,165
Iowa	386	303	2	305	361
Kansas	454	449	3	452	449
Minnesota	430	324	4	328	387
Missouri	700	523	7	530	657
Nebraska	250	218	1	219	229
North Dakota	34	19	b	19	33
South Dakota	54	46	1	47	49
South Atlantic	2,273	1,493	13	1,506	1,983
Delaware	60	18	b	18	32
District of Columbia	160	72	1	73	110
Florida	202	121	1	122	195
Georgia	500	438	2	440	493
Maryland	514	255	2	257	416
North Carolina	109	71	3	74	97
South Carolina	75	34	1	35	54
Virginia	331	183	2	185	274
West Virginia	322	301	1	302	312
East South Central	1,331	1,156	8	1,164	1,234
Alabama	423	336	2	338	361
Kentucky	386	318	2	320	354
Mississippi	245	242	2	244	245
Tennessee	277	260	2	262	274
West South Central	3,439	3,428	16	3,444	3,431
Arkansas	257	255	1	256	256
Louisiana	638	630	4	634	632
Oklahoma	527	527	3	530	527
Texas	2,017	2,016	8	2,024	2,016
Mountain	1,107	1,050	7	1,057	1,086
Arizona	260	241	2	243	257
Colorado	334	325	2	327	333
Idaho	18	17	1	18	18
Montana	105	102	b	102	103
Nevada	22	10	b	10	12
New Mexico	156	155	1	156	155
Utah	154	146	1	147	152
Wyoming	58	54	b	54	56
Pacific	4,262	4,152	21	4,173	4,235
California	4,088	4,044	18	4,062	4,077
Oregon	91	51	1	52	76
Washington	83	57	2	59	82

a. Including customers already using gas for househeating.

b. Less than 500 customers.

Househeating customers up 1.1 million

At the end of 1959 there were 20,162,000 househeating customers of gas utilities in the United States, compared to 19,986,000 on December 31, 1958. This gain of 1,159,000 represents an increase of 6.1 per cent in the number of customers using gas for househeating and raises the proportion of such customers from 64.9 to 66.7 of all residential customers of gas utilities. Furthermore, 81.2 per cent of the potential attainable saturation of househeating among existing customers has now been achieved.

The househeating customer data do not reflect dwelling units in those apartment houses that provide heat from one central gas-fired furnace or boiler. However, a few utilities in large metropolitan areas have made estimates of the number of their residential customers (using gas primarily for cooking) who live in such gas heated multi-dwelling structures; these estimates appear in the footnotes to the company data. It should be noted that all the statistics included in this report refer to residential service provided by utility gas companies and do not reflect homes heated by bottled (liquefied petroleum) gas beyond the mains.

It is anticipated that 3.9 million residential gas heating customers will be added during the next three heating seasons. Of this increase 2.6 million,

ANTICIPATED ADDITIONAL GAS HOUSEHEATING CUSTOMERS,^a 1960-1963, BY STATE

(Thousands of Customers)

	1960-1961 Heating Season			1961-1962 Heating Season			1962-1963 Heating Season		
	Total	New Dwelling Units	Existing Dwelling Units	Total	New Dwelling Units	Existing Dwelling Units	Total	New Dwelling Units	Existing Dwelling Units
United States	1,327	827	500	1,287	861	426	1,295	882	413
New England	47	14	33	49	15	34	51	15	36
Connecticut	12	4	8	13	4	9	13	4	9
Maine	b	b	b	b	b	b	b	b	b
Massachusetts	28	8	20	29	9	20	30	9	21
New Hampshire	2	1	1	2	1	1	2	1	1
Rhode Island	5	1	4	5	1	4	6	1	5
Vermont	b	0	b	b	0	b	b	0	b
Middle Atlantic	173	88	85	174	90	84	174	90	84
New Jersey	39	25	14	39	25	14	39	25	14
New York	81	33	48	83	35	48	83	34	49
Pennsylvania	53	30	23	52	30	22	52	31	21
East North Central	412	171	241	338	185	153	310	184	126
Illinois	134	45	89	83	44	39	79	45	34
Indiana	49	20	29	52	32	20	46	28	18
Michigan	101	36	65	85	37	48	70	37	33
Ohio	77	55	22	74	56	18	75	58	17
Wisconsin	51	15	36	44	16	28	40	16	24
West North Central	104	60	44	112	59	53	119	62	57
Iowa	20	9	11	26	9	17	31	10	21
Kansas	9	8	1	9	8	1	9	8	1
Minnesota	27	14	13	29	14	15	31	15	16
Missouri	34	19	15	34	18	16	33	18	15
Nebraska	10	7	3	11	7	4	11	7	4
North Dakota	2	2	0	2	2	0	2	2	0
South Dakota	2	1	1	1	1	b	2	2	b
South Atlantic	109	79	30	114	81	33	119	85	34
Delaware	2	1	1	2	1	1	3	2	1
District of Columbia	3	1	2	3	1	2	3	1	2
Florida	15	11	4	17	10	7	19	11	8
Georgia	24	20	4	26	22	4	28	24	4
Maryland	23	19	4	23	19	4	23	19	4
North Carolina	13	9	4	14	10	4	14	10	4
South Carolina	9	3	6	9	3	6	9	3	6
Virginia	15	12	3	15	12	3	15	12	3
West Virginia	5	3	2	5	3	2	5	3	2
East South Central	55	44	11	56	45	11	57	46	11
Alabama	15	14	1	16	15	1	17	16	1
Kentucky	16	12	4	16	12	4	16	12	4
Mississippi	10	9	1	10	9	1	10	9	1
Tennessee	14	9	5	14	9	5	14	9	5
West South Central	129	122	7	132	128	4	136	131	5
Arkansas	11	10	1	10	10	b	10	10	b
Louisiana	25	22	3	25	23	2	26	24	2
Oklahoma	15	15	0	15	15	0	15	15	0
Texas	78	75	3	82	80	2	85	82	3
Mountain	90	60	30	97	64	33	111	72	39
Arizona	20	18	2	20	18	2	23	21	2
Colorado	17	15	2	17	16	1	19	18	1
Idaho	25	3	22	31	3	28	37	3	34
Montana	3	2	1	3	2	1	3	2	1
Nevada	1	1	b	1	1	b	1	1	b
New Mexico	12	12	b	14	14	b	17	17	b
Utah	9	7	2	9	8	1	9	8	1
Wyoming	3	2	1	2	2	b	2	2	b
Pacific	208	189	19	215	194	21	218	197	21
California	181	178	3	187	183	4	190	186	4
Oregon	9	3	6	9	3	6	9	3	6
Washington	18	8	10	19	8	11	19	8	11

a. Reflects expectations of entire gas industry.

b. Less than 500 customers.

or 67 per cent, will be in newly built homes, while conversions from other heating fuels will account for 1.3 million. New housing is expected to

provide a higher proportion of total expected additions than at any time in the past, mainly because, as indicated above, over 81 per cent of all

present customers who might potentially use gas heating already are doing so. It should be emphasized that
(Continued on page 41)

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Cincinnati Gas & Electric promoted BRIDE & HOME kitchen exhibit cleverly by tieing-in a window display based on the magazine

Gas kitchen, display tie-in is tops

The Cincinnati Gas and Electric Company recently demonstrated with a New Freedom kitchen how a utility company can dramatize the appeal of gas appliances to the young homemaker. The kitchen they used is the MONTHLY's New Freedom choice for May.

The popular consumers' magazine, *Bride & Home*, designed the modern, all-gas kitchen unit, which came complete with cabinets, accessories, and appliances. Cincinnati Gas and Electric put it to use effectively with a two-step promotion.

The company set up in the lobby of one of its main buildings the complete kitchen unit as it appeared in the pages of the winter issue of *Bride & Home*. A window display, featuring a copy of the special issue of the magazine and a

model of the blue-flame symbol of the gas industry, was arranged to draw visitors to the exhibit.

Wedding bells and other promotional materials for the display were supplied by *Bride & Home*. The entire unit, as shown in the photograph above, was itself a loan from the magazine, with the utility company paying the costs of shipping and erection.

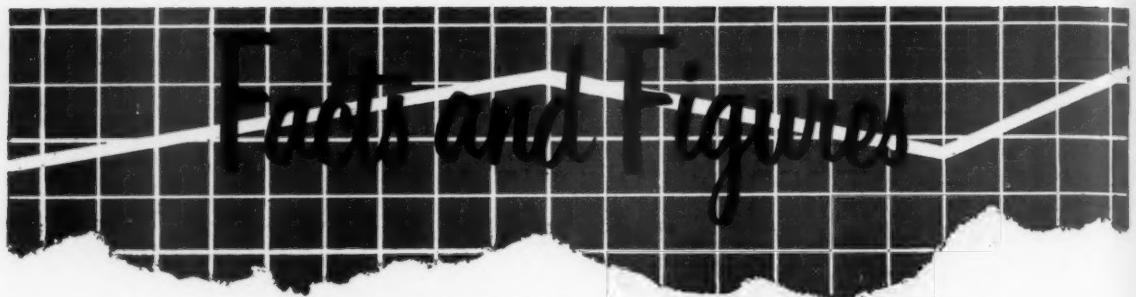
The kitchen was designed with judicious use of available room, a solid unit of easily accessible counter space, and sufficient adjustable lighting to make it both practical and efficient. The unit included a built-in Tappan gas range, with oven and counter-top burners; an RCA-Whirlpool gas refrigerator; a dishwasher; and a novel timesaving and step-saving device, an intercom AM-FM

radio, which would permit a housewife to answer her front door without leaving her work.

Major work areas of the room were lighted from the ceiling by spotlights. The fixtures could be swiveled in whichever direction light was needed. The walls overhead were lined with steel cabinets that had been finished in a wood-grain plastic that is easy to care for. A pineapple motif on the soffit was repeated in the white vinyl floor.

The month following this installation, Cincinnati Gas and Electric made room for another all-gas kitchen in its lobby.

Details regarding New Freedom gas kitchens and promotional arrangements may be obtained from the A. G. A. New Freedom Home Bureau.



Prepared by A. G. A. Bureau of Statistics

Total operating revenues of the gas utility and pipeline industry for the year 1959 aggregated \$7,952 million, a figure 11.9 per cent higher than the one for 1958.

Operating expenses during the year increased by \$592 million, up 12.3% over the previous year to a total of \$5,423 million. Depreciation, retirement, depletion, and amortization charges of \$527 million were 7.1 per cent above a year ago. Total tax accruals of \$979 million were \$116 million above the previous year, a gain of 13.4 per cent. Total operating expenses amounted to \$6,929 million, up 12.0 per cent over 1958, indicating an operating ratio of 87.1 per cent.

Net income rose by 10.4 per cent to a total of \$764 million. The net income for 1959 was equal to 9.6 per cent of the total operating revenues, as compared to the 12.3 per cent paid in taxes.

Total construction expenditures for the industry during January, 1960, were estimated at \$114 million, as compared with \$80 million for January of last year. During February, 1960, construction expenditures by the gas utility and pipeline industry were estimated at \$120 million compared with \$107 million for February of last year. On a percentage basis the increases were 42.5 per cent and 12.1 per cent, respectively for the same months of the previous year. Preliminary estimates of the 1960 construction program of the gas industry indicates a record \$2,099 million will be expended.

Housing starts during February totaled 76,600. The February starts for privately and publicly owned units were 18.9 per cent below February, 1959. For the first two months of this year, the average seasonally adjusted annual rate of private housing starts

(Continued on page 25)

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING FEBRUARY 1960

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	February		January	
	Units	Per Cent Change	Units	Per Cent Change
RANGES (including built-ins)				
Gas	159,000	+ 4.3	132,100	-11.2
Electric	143,200	+ 6.4	113,500	-6.0
WATER HEATERS				
Gas	213,800	-17.7	215,900	-18.9
Electric	60,500	-19.9	48,700	-22.3
GAS HEATING—total				
Furnaces	58,300	-5.2	59,800	-5.7
Boilers	8,071	+27.1	6,873	+13.5
Conversion burners	7,500	+23.0	7,100	+6.0
OIL-FIRED BURNER INSTALLATIONS				
	35,997	+ 0.9	47,977	+ 9.0
DRYERS				
Gas	38,500	+ 4.4	37,400	-5.6
Electric	69,900	+ 0.7	74,200	-5.6

Sources: Gas Appliance Manufacturer's Association, National Electrical Manufacturer's Association, "Fuel Oil and Oil Heat," and American Home Laundry Manufacturer's Association.

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING FEBRUARY

(MILLIONS OF THERMS)

	1960	1959	Per Cent Change
Month of February			
All types of Gas	9,796.5	9,372.5	+4.5
Natural Gas	9,491.9	9,042.0	+5.0
Other Gases	304.6	330.5	-7.8
Twelve Months Ended February 29			
All types of Gas	87,728.5	81,840.5	+7.2
Natural Gas	85,456.4	79,384.4	+7.6
Other Gases	2,272.1	2,456.1	-7.5
February Index of Monthly Utility Gas Sales (1947-49 = 100)			
	279.9	267.8	+4.5

PERTINENT BUSINESS INDICATORS, FEBRUARY 1960

(WITH PER CENT CHANGES FROM CORRESPONDING PERIOD OF THE PRIOR YEAR)

	February		January		Per Cent Change	
	1960	1959	1960	1959		
Industrial activity (1947-49 = 100)	167	155	+ 7.7	169	152	+11.2
Consumer prices (1947-49 = 100)	125.6	123.7	+ 1.5	125.4	123.8	+ 1.3
Housing starts, non-farm (thousands)	76.6	94.5	-18.9	75.0	87.0	-12.8
New private construction expenditures (\$ million)	2,655	2,474	+ 7.3	2,737	2,582	+ 6.0
Construction costs (1947-49 = 100)	179.6	172.5	+ 4.1	179.4	171.9	+ 4.4

Potential appliance sales:

57.4 million in 1960-1964

It is estimated by the Bureau of Statistics of the American Gas Association that the potential attainable market for gas appliances and equipment during the 1960-1964 period aggregates 57.4 million units. This market may be defined as the maximum number of units which would be sold under optimum conditions of product improvement and promotion effort, barring any major change in the nation's economy. It may also be considered as a sales target and a criterion against which to evaluate actual industry performance.

This outlook represents an improvement of 400,000 sales over the five-year forecast made two years previously, predicting potential sales of 57 million appliances for the years 1958-62.

The potential markets for individual appliances are: 13.3 million gas ranges, 18.0 million gas water heaters, 7.4 million pieces of gas central heating equipment, 10.1 million gas space heaters, 3.3 million gas floor and wall furnaces, 5.0 million gas dryers and 0.3 million gas incinerators. Sales levels such as these will represent (at current prices) an investment of over \$10.9 billion on the part of American consumers, or well over half as much as gas utilities themselves now have invested in their physical plant. Exactly half of the potential market, 28.7 million units, can be attributed to the replacement of existing gas equipment. Another 21.6 million units, 38 per cent, are expected to represent original installations; that is, equipment put in place in new homes or in existing homes currently without the use of these appliances. The remaining 12 per cent of the potential market, or

7.1 million units, will replace competitive equipment. (All these data include appliances using bottled or tank liquefied petroleum gas, as well as those connected to utility services.)

Sales of gas appliances and equipment during the most recent five years, 1955-1959, totalled 42.6 million units. It is, therefore, possible that gas utilities and dealers can improve their appliance sales by as much as one third during the next five years. The largest relative gains may be experienced in sales of automatic gas water heaters, gas heating equipment and automatic gas dryers. Unit sales of these appliances may show increases of between 30 per cent and 126 per cent during the first half of the coming decade.

If present levels of promotion activity are maintained, current trends in consumer acceptance may be expected to continue. In that case, dealers and utilities may expect to sell 50.7 million gas appliances in the coming five years, approximately 8 million more units than were sold between 1955 and 1959. It can thus be seen readily that accelerated and improved promotion and development effort could conceivably improve sales by better than 13 per cent. (These projections are labelled "Forecast" in the accompanying tables.) The replacement of gas appliances will represent somewhat over half of the forecast sales, while the new installation market accounts for three-eighths of the total, and replacement of competitive equipment for a little over one-ninth.

In preparing estimates of the potential market some of the factors which were taken into account were new resi-

dential construction (by census region and by type of structure), acceptance of gas appliances in new housing (again, by census region and by type of structure), the number of gas and competitive appliances and equipment currently in use and their individual rates of replacement, growth patterns of newly developed appliances such as built-in ranges, dryers and incinerators, and the demand for additional heating units in homes where non-central equipment is used. The effects of the 1959 steel strike were also considered; it was concluded that despite some shortages of material for production and the modest reduction in consumer income, current demand for appliances was met, by and large, and there remained no very substantial backlog of demand to inflate sales in 1960.

Many experts agree that new residential construction will experience a sharp decline from the record 1,377 thousand units started in 1959. Consequently, it is forecast that new housing starts in 1960 will total 1,220 thousand. The same level will be maintained in 1961, but will increase gradually in subsequent years, reaching 1,400 thousand in 1964. Total new home construction during the five years is estimated to be 6,400 thousand units. Slightly less than 85 per cent of that total will be accounted for by one- and two-family dwellings.

Details of the potential market for individual gas appliances and equipment are provided below. Any requests for further details, or explanations of methodology employed and appropriate uses for these data should be directed

POTENTIAL ATTAINABLE MARKET FOR GAS RANGES, 1960-1964

	New Housing	Replace Gas	Replace Competitive	Total	Free-Standing	Built-in
Potential Attainable Market						
1960	770,000	1,300,000	285,000	2,355,000	1,870,000	485,000
1961	770,000	1,395,000	280,000	2,445,000	1,865,000	580,000
1962	785,000	1,555,000	270,000	2,610,000	1,905,000	705,000
1963	805,000	1,690,000	265,000	2,760,000	1,920,000	840,000
1964	855,000	1,995,000	265,000	3,115,000	2,065,000	1,050,000
Five Years	3,985,000	7,935,000	1,365,000	13,285,000	9,625,000	3,660,000
Forecast Sales						
1960	725,000	1,185,000	255,000	2,165,000	1,700,000	465,000
1961	725,000	1,240,000	250,000	2,215,000	1,690,000	525,000
1962	735,000	1,325,000	235,000	2,295,000	1,685,000	610,000
1963	755,000	1,410,000	220,000	2,385,000	1,685,000	700,000
1964	795,000	1,540,000	205,000	2,540,000	1,715,000	825,000
Five Years	3,735,000	6,700,000	1,165,000	11,600,000	8,475,000	3,125,000
Past Years' Sales						
1959				2,010,500	1,657,600	352,900
1958				1,896,500	1,665,000	231,500
1957				1,968,700	1,771,500	197,200
1956				2,177,400	2,012,100	165,300
1955				2,334,800	2,234,800	100,000
Five Years				10,387,900	9,341,000	1,046,900

to the Bureau of Statistics, American Gas Association.

Ranges

The potential market for gas ranges during the 1960-1964 period amounts to 13.29 million units. This sales total would represent a 28 per cent (or 2.9 million unit) increase over the sales total for the years 1955 to 1959. Free-standing ranges, representing 72.5 per cent of the potential market, may come to 9.63 million units, a modest increase over sales of the most recent five years. Built-in cooking units, however, show a strong potential for sales growth, possibly to totals in the coming five years which would be three and a half times as great as sales during 1955-1959. The acceptance of built-in units by new home buyers has already been demonstrated, and the popularity of this type of installation in the new home market can be expected to increase significantly. Built-in cooking units are growing in popularity in the replacement market, too, especially in association with kitchen remodeling. If the trends that have been experienced recently should continue (and it is assumed that they will do so, to a large extent, with the maintenance of current levels of promotion), it is forecast that sales for 1960-1964 will aggregate 11.6 million ranges—8.43 million free-standing units and 3.17 million built-in.

Well over half of the future market

is made up of present users of gas ranges. Potentially, with optimum promotion effort and product design improvement, gas range replacement sales may reach 7.93 million units. With continuation of current sales stimuli, a total of 6.70 million in replacement sales is forecast. It should be noted that the number of ranges eligible for replacement is smaller during this five year period than for any other similar period in the recent past or near future, a reflection of war years and their minimal sales levels. From 1964 on, replacement sales are expected to become even more important than at present, as the great number of ranges of postwar vintage become eligible for replacement.

The success of the Gold Star range program, with its emphasis on quality construction and advanced design, is an important factor in partially mitigating the effect of the war years' low sales volumes on replacement sales. The first year of the program's operation has shown marked results, and it is forecast that the cumulative effect of its continuation will induce a significant number of consumers, as many as 365,000 of them in the next five years, to update their plans for replacement of ranges. Potentially, the effect on sales of an augmented Gold Star program may be up to three times as great.

The potential market for gas ranges as replacements of competitive cooking equipment amounts to 1.37 million units, while continuation of current

trends should produce 1.17 million conversions to gas cooking. Replacement of electric ranges, a prime goal of competition, can be expected to increase in number, as a favorable effect of Gold Star promotion. However, the larger segment of the market for replacement of competitive cooking equipment consists of obsolete units using kerosene, coal and wood. Since ranges of this type are rapidly disappearing from the American scene (a tendency hastened, perhaps, by effective promotion of modern ranges), this part of the market is shrinking steadily.

Current acceptance trends indicate that new home installations of gas ranges will be 3.74 million units during the coming five year period. Additional efforts could raise sales to a potential 4 million unit level. The installation of gas ranges in new homes, although it represents only about one-third of the total market, is of major importance. The effect of high acceptance in new homes is psychologically valuable since in the public mind it is associated with modernity and desirability. From the gas utility's standpoint, initial installation of a gas range in the kitchen of a new home reduces the possibility that heavy duty electrical wiring will be brought in for other uses.

Water Heaters

In the five years ending 1964, the potential market for gas water heaters aggregates 18.02 units. This would better the sales performance of the 1955-1959 period by over 4 million units or 30 per cent. With present trends continuing, sales should amount to 16.72 million.

The present rate of acceptance of gas water heaters in new homes indicates that 4.68 million units will be installed within the coming five years. This number can be increased to 4.86 million by more aggressive efforts. These additional sales would be made both to homeowners using competitive heating fuels, and also to gas househeating customers in new homes, above those indicated by present trends.

Existing homes currently without the use of hot water are to have installed 1.52 million gas units during the next five years if full potential is met. This segment of the market, despite its still substantial size, is rapidly diminishing and it is quite possible that "hot water"

(Continued on page 36)

Good customer relations are a responsibility of every gas company employee

Promoting better customer relations

By LYLE BELLAMY

East Ohio Gas Co.
Cleveland, Ohio

Customer Relations is a subject about which many articles have been written and many opinions have been expressed. This subject is so important in the utility business that it can never be forgotten. Rather, it should be under constant consideration by management and every employee.

Without good customer relations any business is handicapped, the utility business especially. Good and bad effects can be created both on and off the job. Policies adopted by the company affect customer relations, of course, but the greatest effect comes as a result of the daily contacts made by the employees who serve our customers. To the customer these employees are the company and opinions are formed as a result of their actions.

Employees who are engaged in customer relations work must have the tools with which they can do an efficient job. They must have sufficient knowledge of the business and be sufficiently trained in customer relations work. In addition, they should create a good appearance and possess pleasing personalities. Those individuals endowed with a genuine interest in helping people have the most desirable qualification of all.

When mention of customer relations employees is made too many times the full meaning of this terminology is not immediately apparent. The first reaction is to think of office employees engaged in customer service work, but further consideration brings out the fact that all employees are engaged in varying degrees of customer service. This is

borne out by the fact that we do not sell a product but rather the service which our product will provide for the customer.

Since all of us are engaged in serving the customer he becomes a most important individual upon whom we are dependent because his wants keep us in business. He is not just one of those every day occurrences or unavoidable things connected with our job. He is our job. Every employee should deem it a pleasure to serve the customer.

The customer is so important that he should be treated as a guest when he comes to the office, and with respect and courtesy when we call upon him. In our telephone contacts and letters this same atmosphere must prevail.

All employees responsible for the treatment received by the customer are engaged in customer relations. In order to do a satisfactory job these employees must know what is expected of them and our method of administering company policy. These employees must be schooled so that they can handle their work efficiently. Everyone will no doubt agree that office contacts can be handled in most cases more easily than those contacts requiring a call at the customer's home or place of business. The important point to be brought out here is that employees with proper training and consideration for the customer can many times convert a dissatisfied customer to a satisfied customer. The thing of utmost importance in any customer relations problem is the manner in which the employee conducts himself. To do the job as it should be done he must have know-how, experience and knowledge.

The telephone can be a means of communication resulting in a good contact with a satisfied customer or a poor

contact resulting in a disgruntled customer. We have all had the experience of calling by phone and being answered by some flip, disrespectful clerk. This is very disconcerting. Since a great part of business today is transacted by use of the telephone, our telephone contacts should receive prompt and courteous service, and sufficient training should be given the employees engaged in this segment of our business to enable them to perform in a satisfactory manner.

Many times a customer in a state of anger or dissatisfaction will write a letter which as the saying goes "tells us off." This is the customer's way of getting a problem off his chest. To us these letters may be a routine matter, but to the customer it is a serious problem to which he is seeking a solution. Our letter to the customer must tell the facts while at the same time carrying a friendly tone. Again customer relations can be damaged or improved depending upon the correspondent's ability, obtained through training and experience.

Now, what can the company do to equip these various employees to accomplish the desired end result—namely, good customer relations?

First of all some type of training must be given these employees. What method shall be used and how extensive should it be? We know what we are striving for; therefore, training methods must be formulated in accordance with the needs in the particular phase of business in which the employee is engaged. This employee must be given the right tools to do his job.

Assistance in training programs can be obtained from many sources. One of the best sources for training information is the "Complete Course in Cus-

(Continued on page 33)

Accounting research projects announced

The American Gas Association recently was invited by a representative of the American Institute of Certified Public Accountants (AICPA) to participate in the accounting research projects being instituted by the AICPA. The A. G. A. Committee on Application of Accounting Principles met with the EEI Committee in joint meeting on April 8, 1960 to consider the invitation. At that meeting a letter was approved and has been forwarded to the AICPA advising them of the Committee intent to participate to the fullest extent in these projects and requesting a meeting to develop working arrangements.

The Committee also recommended that as requested the announcement of these research projects be published in the A. G. A. MONTHLY and the notice be forwarded to the chief accounting officers of the member companies. Accompanying the announcement the Committee stated that the industry probably would best be served by having comments and suggestions by member companies with respect to these projects forwarded direct to Mr. T. J. Shanley, Secretary, A. G. A. Accounting Section, without precluding any member company's communicating directly with the AICPA.

The text of the AICPA announcement of research projects follows:

Basic Postulates and Broad Principles of Accounting

The accounting research division of the American Institute of Certified Public Accountants is about to begin a study of two related matters: (1) the basic postulates underlying accounting principles, and (2) a statement of the broad principles of accounting.

The report of the special committee on research program, which was approved by the Council of the American Institute in April 1959, contained the following comments on this project:

An immediate project of the accounting research staff should be a study of the basic postulates underlying accounting principles generally, and the preparation of a brief

statement thereof. . . . Postulates are few in number and are the basic assumptions on which principles rest. They necessarily are derived from the economic and political environment and from the modes of thought and customs of all segments of the business community. The profession, however, should make clear its understanding and interpretation of what they are, to provide a meaningful foundation for the formulation of principles and development of rules or other guides for the application of principles in specific situations. Also, the Institute should encourage cooperative study with other representative groups to determine that its understanding and interpretation of the postulates are valid and to provide a forum which will command sufficient respect to bring about a change in the postulates when any of them become outmoded.

There should be also a study of the broad principles of accounting, and the preparation of a reasonably condensed statement thereof, similar in scope to the statements of the American Accounting Association. The results of these, as adopted by the [Accounting Principles] Board, should serve as the foundation for the entire body of future pronouncements by the Institute on accounting matters, to which each new release should be related.

Accounting for Income Taxes

The accounting research division of the American Institute of Certified Public Accountants is about to begin a thorough study of the accounting for income taxes. A pronouncement on this subject was made by the committee on accounting procedure in Chapter 10(b), Income Taxes, of Accounting Research Bulletin No. 43, and recommendations on various phases of the problem were made in Chapters 9(c), Emergency Facilities, and 15, Unamortized Discount . . . on Bonds Refunded, of Bulletin No. 43, and in Accounting Research Bulletins Nos. 44 and 44 (Revised), and No. 51, Consolidated Financial Statements.

Particular attention will be paid to the problems of income tax allocation among accounting periods where certain transactions reported on the income tax return are reflected in an earlier or later period on the financial statements. The study will include the treatment of loss years, allocation among sections of the financial statements, the handling of

net operating loss carryback and carry-forward adjustments, and other related problems.

This project will be under the specific direction of Professor Homer A. Black of Florida State University.

Accounting for Leases

The accounting research division of the American Institute of Certified Public Accountants is about to begin a study of the accounting problems in connection with long-term leases. A pronouncement on this subject was made by the committee on accounting procedure in Chapter 14 of Accounting Research Bulletin No. 43, Disclosure of Long-term Leases in Financial Statements of Lessees, and the provisions of this bulletin will be reviewed as a part of the new study.

Particular attention will be paid to the problems associated with the increased use of equipment leases and of sale-and-lease-back arrangements, and to the possibility of capitalizing future rental payments for financial statement purposes. The matter will be considered from the standpoints of both the lessee and the lessor.

This project will be under the specific direction of Professor John H. Myers of Northwestern University.

Business Combinations

The accounting research division of the American Institute of Certified Public Accountants is about to begin a study of the accounting problems in business combinations. A pronouncement on this subject was made by the committee on accounting procedure in Accounting Research Bulletin No. 48 and the provisions of this bulletin will be reviewed as a part of the new study.

Particular attention will be paid to the "pooling-of-interests" approach to the problem and a survey will be made of the experience with this type of combination in recent years.

This project will be under the specific direction of Professor Arthur R. Wyatt of the University of Illinois.

Facts and figures

(Continued from page 20)

amounted to 1,162,500, as compared with 1,383,500 for the first two months of 1959.

Gas range shipments during February rose 4.3 per cent over shipments in the comparable month of 1959. Shipments of automatic gas water heaters totaled 213,800 units, down 17.7 per cent from a year ago. Shipments of gas-fired central heating equipment during February remained virtually unchanged from a year ago and totaled 73,871 units. February shipments of gas dryers totaled 38,500 units, up 4.4 per cent.

Total sales of gas to consumers during February aggregated 9,797 million therms, an increase of 4.5 per cent over the 9,373 million therms sold in the comparable month of last year. The gain can be attributed in part to the fact that February of this year contained one additional day and to the colder weather experienced during the month. A. G. A.'s index of total gas utility and pipeline sales for February, 1960, was 279.9 (1947-1949 = 100).

Industrial consumers used 3,372 mil-

lion therms of gas during February. This represented an increase of 6.8 per cent above the 3,157 million therms used in February, 1959.

The Federal Reserve Board index of industrial production (1947-1949 = 100) was 167, an increase of 7.7 per cent above February of last year. A. G. A.'s February index of indus-

PRELIMINARY GAS INDUSTRY INCOME STATEMENT

(MILLIONS OF DOLLARS)

REFERS TO ALL DISTRIBUTING UTILITIES AND PIPELINE COMPANIES

TOTAL INDUSTRY

	1959	1958	Per Cent Change
Total operating revenues	\$7,952	\$7,106	+11.9
Operating expenses—operations	5,160	4,584	+12.6
Operating expenses—maintenance	263	247	+ 6.5
Total operating expenses	5,423	4,831	+12.3
Depreciation, retirements, depletion, amortization, etc.	527	492	+ 7.1
Federal income taxes	569	505	+12.7
All other taxes	410	358	+14.5
Total taxes	979	863	+13.4
Total operating revenue deductions	6,929	6,186	+12.0
Net operating revenues	1,023	920	+11.2
Other income	101	89	+13.5
Gross income	1,124	1,009	+11.4
Interest on long-term debt	358	313	+14.4
Other income deductions	2	4	-50.0
Total income deductions	360	317	+13.6
Net income	764	692	+10.4

trial gas sales was 258.9 (1947-1949 = 100).

The gas utility and pipeline industry sold 87,729 million therms of gas during the 12-month period ended February 29, 1960, showing a gain of 7.2 per cent over the 81,841 million therms sold in the comparable cumulative period ended February 28, 1959.

Gas around the world

(Continued from page 7)

foods. An African exhibit, showing a woman washing clothes in a flowing stream, pointed out the importance of hot water in modern laundering.

The company's Latin-American exhibit called attention to the tropics, and the need for gas refrigeration in hot weather.

The week before the show opened, Noble D. Travis, the company's director of public relations, suggested that Detroiters representing these national-

ities be invited to the opening. Through his acquaintances at the International Institute, Travis was able to bring a representative group to the grand opening for photographs.

Tying in community relations with sales and public relations, Michigan Consolidated designed a second exhibit for the city's Neighborhood Conservation Home showing how homes of the 1925 era could be improved through the installation of modern gas appliances.

One side of the Conservation Home showed a typical bare basement of

1925, a copper clothes boiler once used for washing clothes, an old coal boiler and a side arm water heater of 1925 vintage.

Across from the 1925 model basement, a colorful basement of the 1960's showed Detroiters the tremendous advances in natural gas appliances and the part they can play in improving the standards of the living of the homeowner.

It all added up to a blue ribbon, resulting from teamwork of the company's artists, sales, public relations and community relations staffers.

Industrial relations

(Continued from page 12)

poll was not shown conducted for any reason other than the employer's need for determining its replacement requirements.

During the course of wage negotiations, both the company and the union had submitted wage proposals, but no agreement was reached, and the union served notice of its intention to strike after rejecting the company's last offer. The company then canvassed its employees by letter, stating

that operations were scheduled to continue despite the impending strike and that the company was seeking to determine its replacement needs. The letter stated that the company's last offer to the union would go into effect with the next pay period, thus increasing the current wages. There was no evidence of independent, 8(a)(1), conduct or union animus on the part of the company.

The general counsel concluded that further proceedings herein were unwarranted. In view of the impasse reached in the contract negotiations between the parties, it

could not be said that the company had violated the act by putting into effect a wage increase equal to its last offer to the union. See NLRB versus Crompton-Highland Mills, 337 U.S. 217. The company's action in polling the employees concerning their strike intentions was not shown attributable to any factor other than its need for determining its replacement requirements. Insufficient basis existed for a finding that such action constituted an unfair labor practice. For more information see New Hayden Coal Company, 108 NLRB 1145, 1146.

Every salesman has three jobs



Speakers at opening session were, from left: Proctor Thomas, J. R. Hammers, Louis P. Shannon, and Fred A. Kaiser, presiding



Tom Brooks, right, turns over traditional gavel to Section chairman Fred A. Kaiser

Greetings, Texas style, were brought to the General Session of the 1960 A. G. A. Sales Conference on Industrial and Commercial Gas at the Shamrock Hilton Hotel in Houston, April 5, 6 and 7, by L. P. Thomas, vice president, Houston Natural Gas Corporation, on behalf of his own company, the Houston Pipe Line Company and United Gas Corporation.

Nearly two hundred delegates were registered for the three-day conference and about forty ladies accompanied their husbands to Houston. A major change was made in the over-all program by departing from custom and bringing speakers from outside of the gas industry.

The program opened with an inspirational sales talk by Louis P. Shannon, Manager, Extension Division, E. I. du Pont de Nemours and Com-

pany, Wilmington, Delaware. His subject, "Three Imperative Sales" was keyed to the conference theme. About these three sales he said, "The first sale is the salesman himself. The second sale is the company's product . . . and the critical sale is the third sale . . . which must be made first." Mr. Shannon stated in effect that we should all think seriously about the principles on which this country was founded and that this third sale was to sell America to Americans.

We need, Mr. Shannon stated, a responsible citizenship, we must arm ourselves with the ideas that made this nation great, and always keep in mind that the public looks to industry to lead our free enterprise system. He exhorted his audience to do something about taxes and inflation so that savings can continue to supply the tools

of industry.

"The Facts About Gas and Electric Heat" was presented by J. R. Hammers, Northern Illinois Gas Company, Bellwood, Illinois, in a dramatic manner. Graphic slides illustrated the superiority of gas fuel over competitive heat in a conclusive manner. In giving details on the experience of his company, Mr. Hammers stated that one building had 346 KW of installed electrical resistance heating equipment and that the electric company estimated an annual heating cost of \$5,213.00. The actual bill was \$6,590.76. To do the same job with gas, at his company's rate, would have cost \$1,415.00. He went on to say, "The electric people claim an initial cost saving of \$25,000 in construction costs by the use of electric heating units. Even if we assume this to be absolutely correct, with



F. Thompson Brooks, left, made the 1960 Hall of Flame presentations



Richard T. Keating, left, presented GAMA PEP contest awards



O. M. Heartsill, Jr., left, H. M. O'Haver, and Ray G. Juergens, right, were featured speakers for the morning session, Industrial Gas Day



Afternoon speakers for the general sessions included, from left, Robert O. Criger, C. L. Staples, and Desmond A. Barry

almost \$5,200 more in heating costs annually as opposed to gas, this hardly looks like a good deal." Other figures were presented which made out an excellent case for gas, as in the case of two identical schools where one heated by electricity at 1.64¢/KWH cost \$6,140.06 and the similar gas school \$3,008.40 with average cost of gas at 74.6¢/Mcf.

Awards presented

Traditional awards are always presented at the General Session with the GAMA PEP Prize Contest Awards being announced by Richard T. Keating, chairman, Hotel, Restaurant and Commercial Gas Equipment Division of GAMA. The 1960 awards were as follows:

For best implementation and overall performance in the 1959 PEP Cam-

paign the Grand Award was awarded to the Oklahoma Natural Gas Company, The Ohio Fuel Gas Company and the Piedmont Natural Gas Company, Inc.

Winners of the First Award for excellence in general promotional activities were the Lacledge Gas Company and the Providence Gas Company.

For achieving highest dollar sales per meter the First Award was presented to the Minneapolis Gas Company and the Scranton-Spring Brook Water Service Company.

Honored for greatest improvement in PEP Campaign participation, the First Award was presented to Alabama Gas Corporation and the Lawrence Gas Company.

Past Section Chairman, F. Thompson Brooks, Philadelphia Electric Company, read off citations for the new

members of the Hall of Flame who this year were:

Leonard W. Crump, Oklahoma Natural Gas Co., Tulsa, Okla., Robert L. Davis, Baltimore Gas and Electric Co., Baltimore, Md., Thomas Z. Dunn, The Ohio Fuel Gas Co., Columbus, Ohio, Joseph Kahn, The Peoples Gas Light & Coke Co., Chicago, Ill., C. B. Kiehle (retired), Michigan Consolidated Gas Co., Detroit, Mich., Richard L. Lang, The Ohio Fuel Gas Co., Zanesville, Ohio, Gerald C. Marrs, The United Gas Improvement Co., Reading, Pa., Jack V. Richards, Jr., New Jersey Natural Gas Co., Asbury Park, N. J., John Sellors, Jr., Bryant Industrial Products Co., Cleveland, Ohio, Raymond W. West, Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., Clem R. Winkler, United Gas Corporation, Houston, Texas.

An unusual hour-long presentation opened the afternoon session.

Robert O. Criger, Editor, *The Sheffield Ladle*, Sheffield Division of Armco Steel Corp., Kansas City, Mo., gave his account of a "Russian Journey." Illustrating his visit to several Russian cities with a hundred or more beautiful color slides, he gave the delegates to the conference an inside story of Russian life, the people, and where and how they live.

Mr. Criger brought out the fact that there was no Red menace to our economy nor do they pose an industrial threat on a broad basis. They do, however, pinpoint their economic warfare and he brought out how one of our states has purchased Russian optical instruments for all the schools. Little by little they pick off some nice business. This we should guard against, he stated. Mr. Criger's talk will be long remembered.

Continuing the sales and competition theme, "Chuck" Staples, publisher, *Actual Specifying Engineer*, Chicago, made it plain to the attending gas men that they must cultivate the friendship of those who write the specifications for jobs. They may be architects, consultants, consulting engineers or perhaps the owner. They are the ones that must be sold on gas equipment and sold before the job is even thought about. These people who eventually will specify the equipment for a job must be contacted regularly to keep the gas story fresh in their minds.

Citing the Coachman's Inn motel in Little Rock, Arkansas, which is a real all-gas job with 40 large gas street lamps and 100 smaller gaslights, a gas kitchen, gas heating and water heating from gas engines that drive electric generators, six 25 ton absorption units for air conditioning operating on steam from a gas boiler, Mr. Staples emphasized the importance of the specifying engineer. He quoted from a letter received in reply to his request for information on this job. The engineer wrote, "I was retained by the owner as the mechanical engineer. . . . Answering your question relative to the specifying influences on this subject, I wish to state that the Arkansas Louisiana Gas Company, the architect and the general contractor had no influence on the specification of equipment for this project. The engineering of this project was solely

my responsibility."

Mr. Staples went on to say that the engineer is of overwhelming importance today and remember that, "he is the man who makes the case for you or against you." He made a wide survey recently and found that engineers in many sections of the country are gas minded because of continued contact by the gas utility.

The most exciting and provocative address of the entire conference was made by Desmond A. Barry, president, Galveston Truck Lines, Houston, Texas. He stood up against secondary boycotts imposed to try to force his employees into a union they had rejected.

How he won his fight, then had to fight again and again, had the delegates on the edges of their seats. Mr. Barry related the entire situation which included not only the union, but government regulatory agencies.

Mr. Barry said all must stand up and fight against unfairness and infectious immorality which has developed over the years in labor, business and government.

If we let conditions such as he described continue and develop, we are being destroyed by our own inaction, he stated.

Other features of General Session day included a tour of Houston for the ladies by the host companies with a luncheon at a well-known country club. This and the Gas Appliance Manufacturers' friendship hour followed by the annual dinner with entertainment constituted the social phase of the conference.

Detailed and specific papers on industrial gas and commercial gas subjects were presented on succeeding days. Leading off for industrial gas, Henry Groppe of Mares & Groppe, Houston, spoke on "Natural Gas for Process Applications and as Raw Material in the Chemical Industry." He outlined special advantages and showed by a series of tables the percentages of natural gas going to various industrial applications and petrochemicals.

Although there is a great amount of natural gas used in the chemical industry, only 14.7% is used in direct process applications for chemical, refining, cement, glass, clay products, primary metals and food. For chemical raw material, the percentage of natural gas used for carbon black is 2.1, and as a

raw material in petrochemicals—ammonia, acetylene, methanol, chlorinated solvents and hydrogen cyanide is only 1.2%, making a total of only 18% for all of the above.

Area Development featured prominently on the program. G. R. (Jack) Walton of Houston Pipe Line Company headed a cast of prominent Houston citizens representing the Houston Industrial Development Team to demonstrate how they went about convincing a prospect that the Houston area could provide everything an industry might require. On the team were representatives for metals, water, transportation, labor, fuel, land, chemicals, utilities and taxes. Mr. Walton, who acted the part of an industrial prospect, asked confounding questions of each representative around the table and the answers made out an excellent case for Houston as the ideal city for any industry.

For large volume air conditioning, Wilfred R. Barnard of The Trane Company, La Crosse, Wisconsin, described the principal features of the Trane absorption equipment operating on a lithium bromide reaction cycle. One of the advantages claimed by Trane is the prevention of crystallization. He outlined future plans of the organization which will aid in promoting gas industrial and commercial air conditioning.

"Appraisal of Future Price Trends of Natural Gas and Competitive Fuels" was discussed by Roger L. Conkling of H. Zinder & Associates, Washington, D. C. In his presentation, he showed examples of fuel prices in a number of areas all over the country for the five year period of 1953-58. He stated that the average prices will increase in the next five years.

Talking about various segments of the gas industry, Mr. Conkling stated that transportation and distribution costs would stabilize as gas faces increased competition. He impressed the thought on his audience that the first essential of the entire industry was to be continually alert to retain and safeguard the present market against all competition. And one primary need was to answer the challenge of the summer valley to improve the load factor.

In spite of the problems facing the gas industry, Mr. Conkling assured

(Continued on page 39)

festival of flame

The Most Significant Convention Exhibit and Idea Exchange
The Gas Industry Has Ever Held—90,000 Sq. Ft.—More Than
Twice As Large As The 1958 "Parade of Gas Progress"

featuring:

- (1) What's New and Significant Technically Since October 1958 In Residential, Industrial and Commercial Gas Appliances and Equipment.
- (2) The Latest In—
 - Gas Air Conditioning
 - Gas Refrigeration
 - New Industrial and Commercial Applications For Radiant Heating
 - Outdoor Uses Of Gas
- (3) Spectacular Display Sponsored By A.G.A. Operating Section Of Equipment and Control Devices Used In All Areas Of Gas Operations, From Exploration To The Ultimate Consumer.
- (4) Gas Company Developments Since October 1958 In Equipment, Processes, Methods Or Procedures Which Have Saved Manpower and Money and Have Resulted In Improved Customer Service.
- (5) Significant New Developments In The Gas Industry's PAR Research Program.
- (6) Festival Of Glamorous Magazine—Designed New Freedom Gas Kitchens And Laundries.

TURN PAGE FOR FULL-COLOR PREVIEW

A.G.A.

FESTIVAL OF FLAME





Who Are the Key Men and Women in Our Future?

By CHRISTY PAYNE, JR.

Chairman, A. G. A. Exhibit Planning Committee

Important advances are on the gas industry horizon—new applications of gas that were only dreamed of a few years ago, significant improvements in current applications of gas, and a vast array of new opportunities in the decade ahead.

Who are the key men and women in your organization who need to know about these new developments? Who is responsible for keeping your sales people informed on what is new and significant in gas appliances and accessories? Who has the job of getting across to your dealers the fact that gas is a growth industry with exciting new products and merchandising possibilities? Which dealers would benefit most by having their enthusiasm for gas recharged? What employees of your company deserve the opportunity to see firsthand the size, scope and complexity of gas industry operations, from the wellhead to the customer's burner?

The persons described above are only a few of the key people who will benefit from visiting the "Festival of Flame" Exhibit at the A. G. A. Convention in Atlantic City, October 9-12.

Centerpiece of the Exhibit will be a spectacular 30,000 square foot educational display by the Operating Section. This display will be known as the "Mall of Flame" and will show the newest actual equipment and control devices used in all areas of gas operations.

The Gas Utilization section of the "Festival of Flame" will include one model of each significant new technical development in residential, industrial, and commercial gas appliances and equipment which became commercially available since October 1958, or which advanced since October 1958 from the prototype to the commercially available stage. Gas appliances and equipment which have entered the prototype or field test stage since October 1958 for the first time will also be featured.

The Committee is inviting each manufacturer of residential, industrial or commercial gas air-conditioning equipment to show one latest model. Similar invitations are being sent to all manufacturers of gas refrigerators.

We also plan to feature significant new infra-red applications of gas and to show, as another first, a special display of outdoor applications of gas.

A number of forward-looking gas companies have been invited to display significant new developments which they have introduced for their own use, including new appliances, systems, methods, procedures, tools and devices. This type of idea exchange has tremendous potential and I urge all industry executives to make certain that they visit the gas company developments section of the "Festival of Flame."

The Exhibit will feature not only what is new and significant technically but also the best and most modern of current appliances and equipment. These will be shown in a glamorous Festival of New Freedom Gas Kitchens and Laundries which will flank both sides of the Convention Exhibit.

Here is what you can do to take full advantage of the opportunities offered by the 1960 A. G. A. Convention and "Festival of Flame":

- 1) Compile a list of key men and women in your company whose responsibilities require that they be kept abreast of new and significant developments in gas appliances and gas operations.
- 2) Add to this list the names of key employees who would benefit by learning firsthand what is new and significant in the gas business.
- 3) Review your list and make certain that your company will be represented at the A. G. A. Convention and "Festival of Flame" by sufficient people to study adequately the new developments shown.
- 4) Compile a list of key dealers, distributors, architects, builders and other important persons whose enthusiasm about the future of the Gas Industry you would like to enlist. I will gladly supply these VIP's with complimentary invitations to the "Festival of Flame."

We urge you and your associates to prepare for the "Soaring Sixties" by learning what is new and significant today.

See you in Atlantic City, October 9-12

Accounting

(Continued from page 23)

Customer Relations" prepared as a result of three years of research and study by the joint A. G. A.-E.E.I. Customer Relations Committee. This complete course in customer relations training is supplemented with authoritative reference material and should serve as an effective guide in training personnel.

The decision to be made is how extensive should the program be and how much will it cost. Is the end result worth the cost? To obtain a program tailor-made to fit our need is often difficult because of the variations in company operations. From formulated training programs a great deal of valuable training information can be obtained, but there is always the necessity of revising the plan to meet the company's policy and methods. Here again the decision must be made regarding the extent of training needed depending upon the particular kind of work involved and the type of employees to be trained.

Upon completion of the training program we have the problem of keeping the employee interested and motivating him to strive continually to do a better job. Many times employees are trained with considerable expenditure of time and money, but immediately after the

training program is completed a deterioration begins and the training value is soon lost. To maintain the maximum benefit obtained from the original training supplementary classes should be scheduled in the form of review, refresher training, or possibly advanced training.

How do we determine whether we have accomplished results from our training program?

This can only be determined from observation which must be accomplished by the supervisors. In this part of the program the supervisor must determine weak spots disclosed in the application of the principles taught in the program. This phase is as important, if not more important, than the training itself and should be followed up very closely. It will disclose those employees requiring additional training as well as those with special aptitudes and abilities.

Now comes the problem of motivating employees to improve their performance. There are a number of ways to accomplish this and each company must decide on the method best suited to its operation. Let it be understood that this is one of the important aspects pertaining to customer relations. Through some medium the employees engaged in this work must be instilled with a de-

sire to do a good job and strive for continued improvement.

When our customer relations deteriorate it is time to take inventory to determine the cause. Immediate steps should be taken to remedy the situation. Few business endeavors survive without good customer relations. This is especially true in the field of utilities.

The fact should be remembered that the customer usually is not our customer by choice, but by necessity. He is in a position where he must obtain a particular service from us since often there is no competition. This condition puts us in an enviable position, but it also carries the important responsibility of furnishing courteous and efficient service in every phase of our dealings with the customer.

Each employee should possess a sense of loyalty and responsibility to the company, the customer and himself. When an individual can appraise his performance and feel that he has put forth a conscientious effort and has done a good job, he should feel personal satisfaction.

To develop good customer relations and provide good customer service every employee must cooperate and put forth his best efforts at all times. Upon our success in this field depends the success of our business.

Dryers

(Continued from page 14)

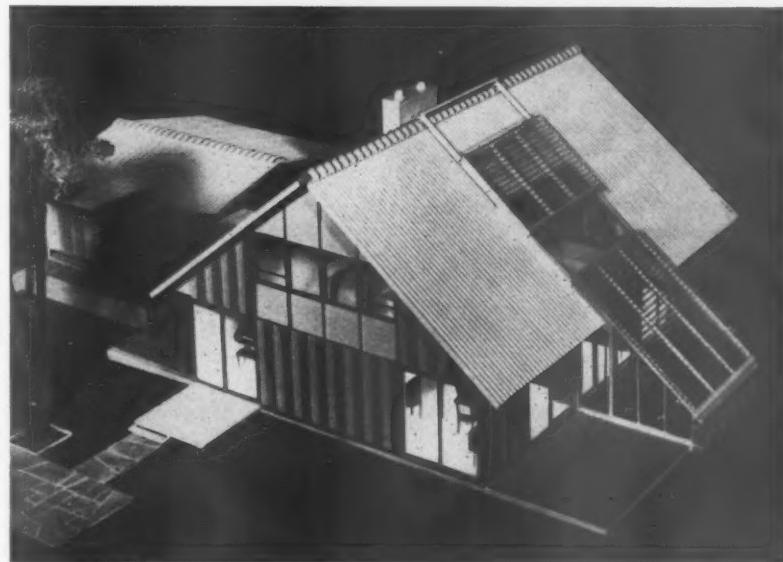
sales. To qualify, a salesman was required to sell five or more dryers. In addition, a \$20 bonus award was offered for each dealer salesman selling and installing four dryers or combinations. "Easy-Does-It" pocket sales summarizers aided salesmen.

Advertising was scheduled in 270 metropolitan dailies, territorials and weekly newspapers and on billboards in the areas served by the two companies. Special spot announcements also were made on the gas companies' evening Concert radio program.

Promotion materials included the A. G. A. animated kitten displays, mobiles, baby pictures, pennants, jumbo kitten displays, towel window banners, "dayglo" decals, and 16-page dryer booklets, featuring baby photographs.

The free installation feature, according to trade press reports, contributed importantly to the campaign's success with consumers.

Porcelain enamel house to use East Ohio gas



The East Ohio Gas Co., Cleveland, Ohio, will supply gas heat for the Ferro porcelain enamel research house being constructed near Cleveland. Above is a scale model of the home whose roof, exterior walls, and interior walls in utility areas will be finished in porcelain enamel of various colors and textures.

*Twenty-six gas companies report on policies and practices
in use of psychological tests for placements, transfers, promotions*

How is your manpower measured?

By ARTHUR R. LANEY, PH. D.

*Washington Gas Light Company
Washington, D. C.*

In 1951 the A. G. A. Personnel Committee conducted a survey of its members to determine the extent to which psychological tests were being used as a personnel administration tool. At that time 48 per cent of the respondents indicated that they used tests for pre-employment screening of applicants, 29 per cent reported that tests were used in connection with employee transfers and promotions, and 19 per cent used them in counseling workers.

A parallel but somewhat more detailed survey completed last fall indicates a definite trend in the direction of greater utilization of personnel testing in the gas industry. All but one of the twenty-six respondents in the 1959 survey reported using tests for pre-employment screening.

This and other findings are presented in the following summary. You will

note that 61 per cent of the respondents now report using tests to help determine transfers and promotions, and 54 per cent currently use them in employee counseling.

Over half the companies represented take test scores into account in selecting individuals for managerial positions, with rather widely varying emphasis from company to company.

Although industrial psychologists stress the need for validation studies within the company as the soundest way of establishing a testing program, the experience of other companies is relied upon somewhat more frequently in the gas industry.

As was also true in the 1951 survey, the Wonderlic Personnel Test, a 12-minute test of general mental ability, is the most widely used single test. The only other test used by half or more of the respondents is the Bennett Test of Mechanical Comprehension. While mental ability and aptitude tests continue to provide the most valid measurements of traits important in job performance, there appears to be a

growing interest in personality and interest tests.

The most common practice followed in "trying out" a new test in the gas industry is to use no specific passing score but to take applicant's test performance into account in the hiring decision. This apparently reflects faith in the experience of other companies and in the judgment of the interviewer as substitutes for an objective company validity study.

Exactly half of the companies report that their test programs are directed by a professional psychologist, either on their own staff or from a consulting firm. A significantly higher percentage of these companies conduct studies to determine in advance the validity of each test, rather than relying on other company experience.

In order of frequency, tests are used by at least two-thirds of the respondents in selecting employees for the following jobs: stenographer or secretary, clerk or typist, office machine operator, mechanic or helper, and supervisor.

SUMMARY OF A. G. A. PERSONNEL COMMITTEE TESTING SURVEY DATA

TEST
SELECTION
BASIS

POPULAR TESTS USED:

HOW NEW
TEST IS
FIRST USED

CO. CODE (N = 28)	TEST USE TESTS FOR:			RETAIN CONSULTING PSYCH'ST?	PARTIAL LISTING OF SPECIFIC JOBS TESTS ARE USED FOR:
	Pre-employment	Transfers & Prom.	Counseling		
A	x	x	Mgmt. Selection		
B	x	x			Weight given given tests, mgmt. select.
C	x	x			Other Co. exper.
D	x	x			Validation study
E	x	x			Face validity
F	x	x			Wonderlic (intel.)
G	x	x			Otis (intel.)
H	x	x			Minn. Clerical
I	x	x			Psych. Corp. Cler.
J	x	x	Secondary		Bennett Mech. Comp.
K	x	x			Kuder (interest)
L	x	x			AVA (personality)
M	x	x			
N	x	x			
O	x	x			
P	x	x			
Q	x	x			
R	x	x			
S	x	x			
T	x	x			
U	x	x			All jobs
V	x	x			Steno-Secy.
W	x	x	?		Clerk-Typist
X	x	x			Off. Mach. Opr.
Y	x	x			Messenger
Z	x	x			Accountant
a	x	x	25%		Laborer
b	x	x	33%		Mechanic/Helper
			75%		Draftsman
Totals	27	17	15	16	Engineer/Asst.
%	96	61	54	57	Meter Reader
					Home Economist
					Sales Repr.
					Supvr.-Mgmt.
					Not listed

* Make all applicants pass.

** Use no specific passing score, but take applicant's score into account in hiring.

*** Give test to applicants but disregard score pending validation.

Appliance potentials

(Continued from page 22)

homes will reach almost 100 per cent of the national housing inventory in about ten years.

As with gas ranges, sales for replacement of existing gas water heaters will dominate the total market during the years 1960-1964. The industry may anticipate a replacement potential of 10.97 million gas units. If no change occurs in product design or promotion, 10.20 million water heaters will be sold. The rate of replacement has been accelerated in recent years by the trend toward larger tanks, in order to meet additional hot water requirements, and the tendency to change from galvanized to non-corroding units. The remaining segment of the market, replacements of competing fuels by gas for water heating, can account for sales of up to 0.67 million units during the coming five years.

Heating Equipment

The 1960-1964 potential attainable market for gas househeating equipment of all types aggregates 20.82 million units, 31 per cent more than the 15.88 million sold between the years 1955 and 1959, inclusive. Individually, there are anticipated potential sales of 7.41 million central heating units, 10.11 million space heaters and 3.30 million floor and wall furnaces. If present sales emphasis persists the market will be equivalent to 18.27 million units. Gas heat is so overwhelmingly America's popular choice that sales forecasts are very close to economically attainable potential.

It is currently estimated that over three fourths of all new one and two family homes are installing gas heating, a proportion which is expected to increase in coming years. Central heating has long been the standard heating method in northern areas and with the growing acceptance of gas heating in these areas, as well as the increasing popularity of such installations in the South and West, domestic size gas central heating equipment will be installed in up to 3.88 million newly constructed dwellings. Sales of gas space heaters and gas floor and wall furnaces can potentially reach 1.25 million and 0.64 million units, respectively, for a potential grand total of 5.77 million pieces of gas heating equipment in new homes. With the continuation of the current trend of

POTENTIAL ATTAINABLE MARKET FOR AUTOMATIC GAS WATER HEATERS, 1960-1964

	New Homes	Replace Gas	Replace Competitive	Existing Homes	Total
Potential Attainable Market					
1960	865,000	1,815,000	105,000	325,000	3,110,000
1961	870,000	1,955,000	115,000	315,000	3,255,000
1962	935,000	2,170,000	130,000	300,000	3,535,000
1963	1,025,000	2,400,000	150,000	295,000	3,870,000
1964	1,160,000	2,630,000	175,000	285,000	4,250,000
Five Years	4,855,000	10,970,000	675,000	1,520,000	18,020,000
Forecast Sales					
1960	855,000	1,775,000	75,000	305,000	3,010,000
1961	850,000	1,855,000	80,000	290,000	3,075,000
1962	900,000	2,000,000	85,000	280,000	3,245,000
1963	980,000	2,190,000	90,000	270,000	3,530,000
1964	1,095,000	2,375,000	105,000	260,000	3,835,000
Five Years	4,680,000	10,195,000	435,000	1,405,000	16,715,000
Past Years' Sales					
1959					2,956,000
1958					2,673,400
1957					2,578,200
1956					2,818,500
1955					2,823,500
Five Years					13,849,600

POTENTIAL ATTAINABLE MARKET FOR GAS CENTRAL HEATING, 1960-1964

	New Housing	Replace Gas	Replace Competitive	Total
Potential Attainable Market				
1960	680,000	235,000	390,000	1,305,000
1961	690,000	270,000	390,000	1,350,000
1962	750,000	310,000	390,000	1,450,000
1963	825,000	355,000	385,000	1,565,000
1964	935,000	420,000	385,000	1,740,000
Five Years	3,880,000	1,590,000	1,940,000	7,410,000
Forecast Sales				
1960	675,000	220,000	370,000	1,265,000
1961	675,000	255,000	365,000	1,295,000
1962	730,000	290,000	365,000	1,385,000
1963	795,000	330,000	365,000	1,490,000
1964	900,000	375,000	360,000	1,635,000
Five Years	3,775,000	1,470,000	1,825,000	7,070,000
Past Years' Sales				
1959				1,357,300
1958				1,118,900
1957				972,100
1956				1,095,800
1955				1,173,600
Five Years				5,717,700

acceptance of gas heat in new homes, central equipment sales will aggregate 3.78 million units and non-central installations will amount to 1.69 million.

During the five years, 1960-1964, potential replacement sales of old gas equipment will amount to 8.83 million units, with central heat accounting for 1.59 million units. A reference to the central heating table below reveals that gas replacements will increase substantially each year from 1960 to 1964.

These increments may be attributed largely to the great number of post-war central heating installations that are becoming eligible for replacement. It is also anticipated that a small number of homeowners will prematurely retire still adequate equipment in order to install year-round gas air-conditioning, in addition to those who will add cooling facilities to their present heating systems. The potential replacement markets for gas space heaters and floor and

POTENTIAL ATTAINABLE MARKET FOR GAS SPACE HEATERS, 1960-1964

	New Housing	Replace Gas	Replace Competitive	Up-grading	Total
Potential Attainable Market					
1960	230,000	880,000	465,000	160,000	1,735,000
1961	230,000	1,010,000	470,000	190,000	1,900,000
1962	235,000	1,115,000	475,000	215,000	2,040,000
1963	260,000	1,185,000	480,000	240,000	2,165,000
1964	290,000	1,230,000	480,000	270,000	2,270,000
Five Years	1,245,000	5,420,000	2,370,000	1,075,000	10,110,000
Forecast Sales					
1960	205,000	795,000	420,000	65,000	1,485,000
1961	205,000	900,000	400,000	75,000	1,580,000
1962	205,000	985,000	385,000	85,000	1,660,000
1963	225,000	1,040,000	370,000	95,000	1,730,000
1964	245,000	1,075,000	350,000	105,000	1,775,000
Five Years	1,085,000	4,795,000	1,925,000	425,000	8,230,000
Past Years' Sales					
1959					1,467,100
1958					1,395,900
1957					1,439,800
1956					1,699,000
1955					1,729,100
Five Years					7,730,900

POTENTIAL ATTAINABLE MARKET FOR GAS-FIRED FLOOR AND WALL FURNACES, 1960-1964

	New Housing	Replace Gas	Replace Competitive	Up-grading	Total
Potential Attainable Market					
1960	120,000	285,000	135,000	30,000	535,000
1961	120,000	330,000	130,000	35,000	615,000
1962	125,000	365,000	130,000	40,000	660,000
1963	130,000	400,000	125,000	45,000	700,000
1964	145,000	435,000	120,000	50,000	750,000
Five Years	640,000	1,815,000	640,000	200,000	3,295,000
Forecast Sales					
1960	115,000	270,000	130,000	15,000	530,000
1961	115,000	310,000	120,000	15,000	560,000
1962	115,000	340,000	120,000	15,000	590,000
1963	120,000	370,000	115,000	20,000	625,000
1964	135,000	390,000	110,000	20,000	655,000
Five Years	600,000	1,680,000	595,000	85,000	2,960,000
Past Years' Sales					
1959					546,800
1958					486,500
1957					430,400
1956					434,300
1955					554,800
Five Years					2,452,800

wall furnaces are 5.42 million and 1.82 million units, respectively. The average annual space heater sales of 2 million units experienced in the late 1940's and early 1950's will influence replacement sales during the coming five years. The replacement market in floor furnaces and vented recessed wall heaters also reflects the same influence. It is considered probable that some gas space heaters will be replaced by wall heaters. Forecast sales of replacement equipment

are estimated to be 1.47 million central heating units, 4.80 million space heaters and 1.68 million floor and wall furnaces, for a total of 7.95 million units.

Nearly 25 per cent of the total potential market, or 4.95 million units, represents replacement, by gas, of equipment utilizing competitive fuels. Over the five year period annual sales of this type should remain constant since virtually every heavily populated area of the

country is now receiving natural gas. However, the East North Central region will account for the major share of conversions in the next five years, when restrictions on heating supplies in this area are either removed or relaxed. (At the end of 1958 almost 500,000 residences, most of them in the Middle West, had applications for gas heat on file with their local utilities.)

The remaining segment of the heating market is devoted to "up-grading" or installation of additional equipment in non-centrally heated homes in order to maintain more comfortable temperature levels. Current trends indicate installation of 0.51 million such units, while higher consumer income and additional promotional efforts can stimulate sales to reach a maximum of 1.28 million units.

Dryers and Incinerators

During the years 1960-1964 a potential market exists for 5.01 million gas dryers in contrast to the 2.21 million appliances sold in the prior five year period. The historical growth pattern indicates that purchases of 3.91 million gas units may be forecast. Since 1954, when the gas dryer had become firmly established as a major appliance, annual sales increases have ranged as high as 52 per cent more than the preceding year. In 1959, for example, sales totalled a record 535 thousand units. This was 25 per cent greater than 1958 sales which approached the previous record mark. (These data include combination washer-dryers with gas drying units.)

The preponderance of sales will be to original owners. Annual initial installations will potentially amount to 0.61 million in 1960 and should increase sharply, reaching 0.97 million by 1964. The abundant source of potential purchasers may be exemplified by the dryer saturation among the 47 million households having clothes washing machines.* At the beginning of 1960 dryers numbered less than one for each five washing machines in use. Of course, every washing machine owner is not a potential dryer purchaser since many consider this appliance as an unnecessary luxury, while others cannot afford its expense.

Under current conditions replacements of gas dryers will account for sales of 0.90 million units and further

* Estimate by Electrical Merchandising Week.

promotional efforts can be instrumental in raising these sales to 1.01 million. While the differential is small at present, it should be stressed that replacements will represent 20 per cent of total sales by 1964 and that they will continue to grow in proportion thereafter. Therefore, it is important that the industry continue its promotion of this product not only to stimulate sales to original owners, but also to maintain a favorable position in the replacement market.

A market for gas replacement of electric dryers has recently come into being and its forecast sales for 1960-1964 period are 55 thousand units. With more vigorous campaigning a full potential of 95 thousand units may be reached during the five years. Worthy of mention, too, is the fact that the number of competitive dryers eligible for retirement will rise sharply after 1964; in 1965 replacement of electric units by gas should be double those of 1964.

Potential sales of incinerators in the next five years may aggregate 0.32 million units. Under present conditions, sales would remain almost constant during the period and total only 0.22 million units.

The smokeless odorless unit, recently introduced, has taken over a large portion of the market but has had little effect on sales as a whole. This can be traced to the fact that incinerator sales are mainly determined by factors other than technical improvements and promotional effort. Although many communities are currently encouraging the use of this item, there are a great many more restricting its utilization at the present time. It is anticipated that as the cost of

POTENTIAL ATTAINABLE MARKET FOR GAS CLOTHES DRYERS, 1960-1964

	Original Installations	Replace Gas	Replace Competitive	Total
Potential Attainable Market^a				
1960	610,000	105,000	5,000	720,000
1961	690,000	145,000	10,000	845,000
1962	765,000	195,000	15,000	975,000
1963	865,000	250,000	25,000	1,140,000
1964	970,000	315,000	40,000	1,325,000
Five Years	3,900,000	1,010,000	95,000	5,005,000
Forecast Sales^a				
1960	520,000	100,000	5,000	625,000
1961	560,000	135,000	5,000	700,000
1962	595,000	175,000	10,000	780,000
1963	625,000	220,000	15,000	860,000
1964	650,000	270,000	20,000	940,000
Five Years	2,950,000	900,000	55,000	3,905,000
Past Years' Sales^b				
1959				535,000
1958				429,200
1957				445,000
1956				434,400
1955				369,000
Five Years				2,212,600

^a Data include combination washer-dryers with gas-fired drying units.

^b Sales of combination washer-dryers with gas-fired drying units estimated by A. G. A.

POTENTIAL ATTAINABLE MARKET FOR GAS INCINERATORS, 1960-1964

		Total
Potential Attainable Market		
1960	55,000	
1961	60,000	
1962	65,000	
1963	65,000	
1964	70,000	
Five Years	315,000	
Past Years' Sales		
1959		44,500
1958		51,800
1957		53,800
1956		71,300
1955		71,700
Five Years		293,100
Forecast Sales		
1960	45,000	
1961	50,000	
1962	45,000	
1963	35,000	
1964	40,000	
Five Years	215,000	

garbage collection increases many additional municipal codes will be amended to allow for the installation of these appliances. Their extensive use in any

given area will result in savings to the entire community which then can be passed on to the individual citizen.

PR Zoo

(Continued from page 9)

sumer-oriented was called for. Also, it was decided that the ads would have to be big enough to attract attention, yet not so big as to raise questions about public utility institutional expenditures.

Once the decision to use animal cartoons was agreed upon, the campaign quickly took shape. The layouts were done in a 4-column by 18-inch size, in order that the ad would extend above the fold of the newspaper. The animal cartoons, created by one of

California's finest commercial artists, Jack Ellenberger, were done in a technique that is disarmingly simple. The copy story was set across the entire width of the ad in extra-large easy-to-read type.

Next step was the selection of media. Daily newspapers were chosen as best suited to reach large numbers of people. Newspaper circulation has always been an important ingredient in successful ad campaigns run by the two utilities.

The Animal Series was scheduled in all four Los Angeles daily newspapers: *The Times*, *Examiner*, *Herald*

Express and *Mirror News*; and in all daily newspapers in suburban communities served by the two companies. The total circulation of these 49 papers is 2,233,959. All ads run over the joint signature of Southern California Gas Company and Southern Counties Gas Company, except in fringe areas where circulation covers customers in only one service area. For example: In the Santa Barbara coastal area, only the Southern Counties signature is used. In the remote areas of the Imperial Valley, only Southern California Gas Company signs the ads.

From the start, the ads appeared to

be highly successful. To make certain, a special readership study was taken. In the January 26, 1960 edition of the Los Angeles Examiner, the high opinion of the ads was substantiated. Of all "national" ads appearing in the *Examiner* that day, the gas companies Kangaroo ad scored as "the ad best read by women" in the entire issue. Among men readers, the ad tied for fifth place.

The PR Zoo is just one campaign in the gas companies' total communications program. And while the An-

imal Series was designed to do a specific public relations job, its other benefits show up in the sales picture of both companies.

The area served by Southern California and Southern Counties gas companies is one of the fastest growing in the world. Since 1945 over 100,000 new homes and apartments have been built each year. And in the face of aggressive competition, 90 per cent of all Southern California homes cook with gas. Ninety-nine per cent of them heat with gas. Ninety-nine per

cent of them heat water with gas. And Southern California is one of the few areas in America where gas clothes dryers have the bulk of that business.

Encouraged by the success of the PR Zoo, the gas companies plan to continue the campaign throughout 1960. A total of 18 ads are scheduled for this year.

None of the ads in the series has been copyrighted. Photostats of the layout and artwork are available to any gas company wishing to use them.

Industrial and commercial

(Continued from page 28)

the assembled delegates that due to increased industry cooperation in A. G. A. promotion and sales campaigns during the past ten years and a more general climate of enthusiasm, the industry will present a united front in the 1960's and be most successful in the fight for sales.

Continuing Industrial Gas Day, Frank Wright, Southern Union Gas Company, Dallas, Texas, described the operation and use of "Small Gas Turbines for Power Generation and Air Conditioning." Slides on both the direct and indirect cycles of gas turbines and their application as prime movers illustrated the two applications referred to in the title of his paper.

An interesting paper was presented by L. E. Nelson, vice president, Kansas-Nebraska Natural Gas Company, Inc., Hastings, Nebraska. While "The Economics of Gas Main Extension for Agricultural Use" is of interest to only a limited number of gas companies, Mr. Nelson's talk proved that an aggressive gas company can develop profitable loads. He showed that by making a main extension to secure water pumping or grain processing business entire communities were sold on gas and added to the load.

The company policy of extending mains to rural areas has resulted in natural gas being used for a wide variety of purposes during the summer months when the load on the system was at a minimum. Increased irrigation due to efficient operation of gas-operated engines on water well pumps has been advantageous to farmers by increased and more uniform yields and an over-all improvement in area prosperity.

A new development in gas burning equipment was described by Dr. Rex T. Ellington of the Institute of Gas Technology, Chicago, whose paper on the "Operating Characteristics of Porous Medium Burners" predicts a far-reaching advance in this field. As his paper was of a highly technical nature, it is suggested that those interested request a copy from the A. G. A. Industrial and Commercial Section.

Opening Commercial Gas Day was Ray Juergens, The East Ohio Gas Company, Cleveland. He made reference to the number of years it took the industry to develop commercial cooking equipment as we know it today and then presented a challenge to the industry to meet the future requirements. He said, "The restaurant of the future will be a push button system with little or no help out in front and only a few people in the back of the house to fill refrigerated storage bins with preprepared frozen foods."

Continuing, he said, "You now can buy prepared flaked potatoes, portion controlled meats and poultry, pre-cooked fish, shrimp and breaded oysters."

Mr. Juergens went on to say that in the very near future, the reconstituting of frozen foods will be a challenge to the gas industry, which he thinks can be met by infra-red gas burners. He suggested a reading of research project 1.A. 14, "Investigation of Infra-Red Energy Production with Gas Burners," by the A. G. A. Laboratories in Cleveland.

It is indicated that infra-red gas burners will improve heating for defrosting, heating for pre-cooking and cooking, and general food processing. Mr. Juergens mentioned other developments in the commercial use of in-

fra-red burners for coffee and other bean and nut roasting. In manufacturing processes, infra-red could be used to speed up drying of starchy foods, spaghetti, noodles or macaroni, and grain cereals. These will offer both a challenge and opportunity to the gas industry to develop equipment and applications for that largest business, feeding people.

A case history of how to conduct a PEP Campaign or Commercial Cooking Sales Campaign was detailed by O. M. Heartsill, Jr., Oklahoma Natural Gas Company, Tulsa. Oklahoma Natural does not merchandise but offers every dealer cooperation in the promotion and sale of equipment.

Special emphasis was given to a travelling trailer show which brings modern commercial gas cooking equipment to customers in remote areas.

Frank Moore, vice president, The Frymaster Corporation, Shreveport, La., described several new features of his company's deep fat fryer and griddle counter equipment. He stated that display pieces he had on the stage would be seen at the Restaurant Show in Chicago together with newly designed built-in equipment.

A complete proposal must be presented to insure a sale of an installation of any consequence, said H. M. O'Haver, Southern California Gas Co., Los Angeles.

He detailed every step in the preparation of a proposal and pointed out that in the general presentation only bare facts were presented. The method by which costs and other figures are arrived at and the details of computations were all put in an appendix. This is done so that the presentation will not become bogged down in complexities. By presenting facts in a concise manner the entire proposal has a bet-

ter chance of being considered as a whole, Mr. O'Haver said.

"Gas Goes to School" by A. B. Banowsky, United Gas Corporation, Houston, brought the problem of school heating to the assembled delegates. Mr. Banowsky stated that with the projected increase in population, more school construction will demand an increase of heating and cooling requirements. Also there is a trend to year 'round use of schools to meet increased educational requirements.

Mr. Banowsky went on to say that in the future school directors will be so occupied with administration details that they will delegate the design of buildings and selection of equip-

ment to architects and engineers. He told the commercial gas men to get out and cultivate these people, so that gas will get those jobs. He concluded his talk by saying, "To me, the whole picture is so overwhelmingly in favor of gas for all services schools can use, that if we take the offensive with all the tools in our kit, we should be increasing our business substantially as these schools grow in number."

The last two speakers on the program presented specific equipment talks. Richard Goder, president, Joseph Goder Incinerators, Chicago, told of the need for on-the-spot incineration because of the vastly increased waste problems of restaurants, hotels, super-

markets and industrial locations. He called attention to Information Letter No. 106 and asked his audience to use that as a guide to incinerator sales.

Norbert Hall of The Ready-Power Company, Detroit, made out an excellent case for gas engine driven compressors for air conditioning. He stated that his company was coming out with a package in the 100 ton range which could be installed in multiple units to meet any tonnage demand.

Following custom, Section committees dealing with industrial gas subjects met the day before the Conference and those having to do with commercial gas subjects met the day after the Conference.

Sales conferences

(Continued from page 6)

"Did Your 'Ear' Get the Message?"

—C. S. Stackpole, managing director, A. G. A.

Conference Luncheon

The annual Midwest Regional Gas Sales Conference is being held May 16 and 17, at the Edgewater Beach Hotel, Chicago.

Delegates registering are from 13 states of the midwestern area.

Conference chairman is Eugene P. Mink, Wisconsin Southern Gas Corp. The program over which he presides in-

cludes such highlights as the following:

Keynote address, by Wister H. Ligon, A. G. A. president.

A review of progress in domestic gas appliances, by Chester S. Stackpole, A. G. A. managing director.

"Lighting the Way for Greater Gas Sales," a talk on the re-birth of gas lighting, by W. G. Wepfer, general sales manager, Arkla Air Conditioning Corporation.

A talk on the Blue Star and Gold Star programs, by W. F. (Bill) Johnson, sales manager, Hardwick Stove Company.

A discussion of A. G. A.-gas utility-homebuilder cooperation, by Jerry Mullins, manager, A. G. A. Home Bureau.

A manufacturer's views on electric heating, presented by Lee A. Brand, vice president, Empire Stove Company.

A panel on Home Service.

A humorous talk on salesmanship by Sam Schneider, Columbia Broadcasting Company.

A talk on "additive" air conditioners by Keith T. Davis, manager, Gas Air Conditioning, Bryant Manufacturing Company.

The conference also features a dinner and a ladies' luncheon.

Both the above conferences are sponsored by the A. G. A. Residential Gas Section.

Mobile homes

(Continued from page 11)

proved for such installation."

In October, 1959, at a meeting of the Approval Requirements Committee, the standards, submitted by subcommittees, for forced air furnaces, floor furnaces and water heaters were adopted. This was followed in March, 1960, by adoption of the standards for domestic ranges, built-in cooking units and recessed heaters. These standards are now in effect.

Manufacturers have been quick to seek approval for their products. By mid-April, appliances found to comply satisfactorily with the new standards included six domestic ranges, five recessed heaters, four water heaters, three built-in cooking units and one floor furnace.

These appliances are approved specifically for installation in mobile homes or trailer coaches, and the fact will be so indicated in the Directory of Approved Appliances and Listed Accessories, according to the A. G. A. Laboratories.

The Laboratories explain that requirements are twofold, in that a manufacturer can submit an appliance for compliance with the standards as follows:

1. For installation in mobile homes or trailer coaches for use with liquefied petroleum gases only.
2. For installation in mobile homes or trailer coaches convertible for use with natural gas or liquefied petroleum gases, in which case provisions for simple conversion from one gas to another shall be incorporated in the construction of an appliance.

As set forth by the Laboratories, the basic differences incorporated in the trailer coach standards as compared to the "normal" standards are:

- a. Trailer appliances must have suitable means of attachment to the trailer structure.
- b. Heating appliances designed for conversion from one gas to another shall have provision to accomplish this, such as by turning a tool-operated selector valve or by locking the regulator in the open position by means of a tool operated integral device. Domestic ranges, for this purpose, shall be provided with double coaxial orifices.
- c. Heating appliances and water heaters shall be of the vented type and suitable for operation in trailers with

ceiling heights as low as six feet, six inches.

d. Combustion air for heating appliances shall be supplied from the outside of the trailer. This may be accomplished either by appliance design or by following specific installation instructions to be supplied with

each appliance.

- e. Heating appliances when installed shall have complete separation of combustion air and circulating air with the exception of recessed heaters having input ratings of 25,000 Btu or less. Here again, the separation of combustion air and circulating air

may be accomplished either by appliance design or by installation.

Appliances approved specifically for installation in mobile homes and trailer coaches are so marked, while those designed for conversion from one gas to another have complete instructions for conversion on the appliance.

Canadian gas

(Continued from page 5)

"With the green light on export, a further \$1 billion is slated for necessary expansion. Extensions to pipelines and gathering systems, and new systems to take the gas to the U. S. markets will cost a further \$500 million; processing

plants will cost \$250 million; the development of additional gas reserves to keep abreast of demand will mean an investment of \$150 million, and a further \$100 million will be spent on new transmission systems.

"The effect on the Canadian economy of additional revenues from the U. S. will be considerable," continued Dal-

ton, "and the Canadian West, in particular, will benefit tremendously."

"In employment alone, one company will provide 2,000 new jobs for Canadians when its construction program gets underway—which will be very soon now that they have received the long awaited permission to export natural gas."

Househeating

(Continued from page 18)

these additions represent the number of additional househeating customers, rather than added pieces of equipment. Many homes which utilize gas-fired floor and wall furnaces or direct space heaters as the primary means of heating employ more than one piece of such equipment.

As in past years, the East North Central states are expected to account for the largest proportion of additional househeating customers in the next three heating seasons. Recent or soon expected relaxation and removal of restrictions in this area have intensified this trend. Additions in the East North Central region are expected to total 1,060,000, which is 27 per cent of all expected incremental heating customers. The Pacific region is second with an expected gain of 641,000 installations. Because this region is a rapidly growing one, 90 per cent of additions are expected to come from new homes. However, the recent arrival of natural gas in the Pacific Northwest states will also bring about conversions to gas heating from other fuels. Ranking third is the Middle Atlantic area, where addition of 521,000 heating customers is anticipated within the coming three-year period. The West South Central region holds fourth place with expected additions totalling 397,000. Another large gainer is the South Atlantic region, mainly because of Florida, whose heavily populated areas started to receive natu-

ral gas during 1959.

There were 56 utilities which reported having either complete or partial restrictions on new gas heating installations as of November 30, 1959. (Complete restrictions prohibit installations of all types of heating equipment, in all types of homes throughout a company's entire service area, except for hardship cases; partial restrictions may apply either to certain types of equipment, to specific portions of the service area, to conversions from other fuels in existing houses or to installations in new homes, or to a combination of any, but not all, of these.) The companies reporting restrictions serve 4.4 million households and serve 14.6 per cent of total residential customers of gas utilities. Twenty seven of these companies, serving 2.6 million residential customers, have indicated a substantial backlog of applications on file for gas

heating permits, totalling 231,000 as of November 1959. By way of contrast, a year ago gas companies serving 18.8 per cent of all residential customers had reported some restrictions in effect.

Information for this study was submitted by individual utilities indicating, in addition to expected new installations, the existence or absence of restrictions, and the number of existing residential users and househeating customers. Industry totals are based upon reports received from the companies as well as estimates for non-responding companies, and thus represent the entire industry.

Reports were received from 356 companies serving 28.3 million residential gas users throughout the nation as of November 30, 1959 representing 94 per cent of the total industry.

Manufacturers of gas heating appliances have indicated the value of this survey in the past in assisting them to determine the magnitude and location of the market for their products. Such information is most helpful to profitable production scheduling and marketing policies. Heating equipment manufacturers are urged to utilize the information in this report rather than to contact individual operating gas utilities for similar statistics. Any manufacturers or utilities requiring additional data of a similar nature should communicate directly with the Bureau of Statistics of the A. G. A.

TOTAL RESIDENTIAL CUSTOMERS OF COMPANIES HAVING GAS HEATING RESTRICTIONS 1950-1959

Year	Residential Customers (millions)	Proportion of Industry Covered
1950	9.5	90%
1951	11.2	92
1952	10.2	93
1953	9.1	92
1954	N.A.	N.A.
1955	6.7	92
1956	5.3	94
1957	5.4	95
1958	5.3	94
1959	4.4	94

El Paso pipeline crosses the Columbia



Bird's eye view of the last of four 1,100-foot pipeline sections, as they await next-to-last weld, which will send them on their way again across the mighty Columbia River in a project that has rivaled a Mississippi River crossing. Two of ten tractors that pushed and pulled were on the Washington side.

THE FIRST LEG of El Paso Natural Gas Company's \$10,500,000 natural gas pipeline ranging up the Willamette Valley in Oregon was recently completed when 4,400 feet of 30-inch pipe were pulled across the vast Columbia River from a point near Camas, Wash.

As work continues on the 125-mile-long pipeline, crews of Northwest Natural Gas Co., Portland, Ore., are busily engaged in laying eight miles of 12-inch main to tie into

the new line. The tie-in will supply additional gas to the southeast industrial and residential sector of Portland. The project, to cost \$362,000, is largest of five tie-ins to be made and will take three months to complete.

Simultaneously, Salem Sand and Gravel Co., Salem, Ore., has begun to lay a seven-mile tie-in of 12-inch, 10-inch, and eight-inch main to serve the Salem area. Cost of this project is estimated at \$194,000, including \$124,000 for materials.

Florida-Georgia Gas Association elects Bills president

THE FLORIDA-GEORGIA Gas Association at its annual meeting on April 8 and 9, 1960, in Palm Beach, Fla., elected as its president John T. Bills, vice president of corporate relations for Peoples Gas System. Succeeding J. D. Nelson, past secretary and treasurer of the association, is H. H. Phipps, manager of the commercial and air conditioning division of The Houston Corporation. The opening session of the meeting was presided over by the association's chairman, Kimbel W. Pofahl.

Delegates to the convention heard Harold P. Bull, vice president of Norge Sales Corporation describe the successes his firm has had in the field of large-volume sales of gas dryers. Mr. Bull proved to his audience that good sales results may be obtained when lo-

cal utilities wage full-scale campaigns in cooperation with dealers.

A. G. A.'s managing director, C. S. Stackpole, was the first speaker on the two-day program, with an address entitled "Pattern for Progress." Mr. Stackpole discussed research and utilization, stressing the importance of new developments, such as the gas fuel cell.

Norval D. Jennings, director of promotion and advertising for A. G. A., and W. D. Williams, vice president of New Jersey Natural Gas Company, opened Friday's afternoon session with a presentation entitled "Show—Tell—Sell." On the same program Charles H. Avery, residential sales manager of The Houston Corporation, spoke on "Selling Natural Gas in Florida."

FCC authorizes stations

THE FEDERAL Communications Commission (FCC) recently issued authorization in the Petroleum Radio Service for 19 base stations, 28 temporary base stations, nine fixed stations, and 112 mobile units. Among those authorizations were one base station at Sonora, Texas, for El Paso Natural Gas Co.; one base station at Hamilton, Mich., for Michigan Gas Storage Co.; three fixed stations at Coal Grove, Ohio, for The Ohio Gas Fuel Co.; and one base station at Morgan

in Petroleum Radio Service

City, La., for Texas Gas Transmission Corp.

Meanwhile, a petition has been filed with the FCC by officers of the National Committee of Utilities Radio (NCUR), requesting additional high-band frequencies for Power Radio Service licensees in the six states that have been denied use of new channels. The channels were formed in a power block of frequencies when band width was reduced from 60 kc. to 30 kc. The states involved include Washington, Oregon, Texas,

Rental plan succeeds

RENTALS OF commercial gas water heaters, on a plan initiated by the Citizens Gas and Coke Utility, Indianapolis, Ind., have been topped by Quebec Natural Gas Corp., Montreal, Que., on comparative results for the starting period. The "Indianapolis Plan" included sales to stores and other business establishments.

At Indianapolis, a total of 252 commercial installations were rented in the first 18 months of the plan. In half that time, 214 commercial rental installations were made at Montreal.

Laboratories play host

THE A. G. A. Pacific Coast Laboratories recently played host to Annette Vella, a senior high school student who had been cited by the Business and Professional Women's Club of Santa Fe Springs, Calif.

Jeanne R. Ruben, a secretary-bookkeeper at the West Coast Laboratories, arranged the visit as part of an annual program of the business women's organization to which she belongs. She was among 23 members to choose two senior high school girls from the Santa Fe Springs area to be honored by the club. The object was to invite one of the students to spend a day on the job with each of the 23 members in order to become acquainted with the duties performed by each within her organization.

Besides receiving an introduction to the aspects of a professional woman's world, Miss Vella learned what A. G. A. stands for and what services are offered to the gas industry by the A. G. A. Laboratories at Cleveland and Los Angeles.

The second day's program included R. F. Calrow on "Selling Gas in the New Home Market." He illustrated, with the example of Minneapolis Gas Company, the cooperative program a utility can arrange with home builders through A. G. A.'s Blue Star Home Program.

Other speakers included the Honorable F. O. Dickinson, Jr., a candidate for Governor of Florida; R. J. Vandagriff, Laclede Gas Co.; Mildred R. Clark, Oklahoma Natural Gas Co.; Sol Weill, Geo. D. Roper Sales Corp.; W. W. Selzer, Columbia Gas System Service Corp.; and R. H. Willis, Stone and Webster, Inc.

In charge of arrangements for the program speakers were Frank Williams and James K. Roberts.

Louisiana, Arkansas, and Oklahoma.

NCUR members met recently with the Operational Fixed Microwave Users Council to discuss the Electronic Industry Association's recommendations on standards for microwave band width.

The 1960 annual meeting of NCUR is scheduled for June 15, 16, and 17, 1960, in St. Petersburg, Fla. All licensees of the Power Radio Service, as well as members of NCUR and its sponsors, are invited to attend.

Industry news

CBS-TV schedules Mrs. America Pageant

THE 22ND ANNUAL "Mrs. America" Pageant, featuring the national finals of the Mrs. America Homemaking Contest will be televised once again over the CBS-TV coast-to-coast network on Friday, June 10, 1960, from the War Memorial Auditorium in Fort Lauderdale, Fla. The pageant and finals will be staged June 2 through 14, 1960.

This will mark the fourth consecutive year that Fort Lauderdale will play host to the nation's top homemakers and their husbands. The homemaking events of the Mrs. America national finals are an all-gas promotion.

As in previous years, state contests are conducted by gas utility companies, with cooking on gas ranges one of the requirements. The Whirlpool Corp., St. Joseph, Mich., one of the Mrs. America national sponsors, has supplied RCA-Whirlpool gas ranges and other gas appliances at both the state and national levels.

Whereas in the past, A. G. A. sponsored the contests at local and state levels, this year Mrs. America, Inc., owners of the registered name, "Mrs. America" and founders of the contest, have worked directly with gas utilities in many states and with television and radio stations, shopping centers, department stores, and newspapers in others. Mr. Hansell Hillyer, president of the Savannah Gas Co., Savannah, Ga., is serving as chairman for the participating gas companies.

The current Mrs. America, Mrs. Margaret Priebe, of Des Moines, Iowa, has won many friends for the gas industry during her extensive tour of the nation in the past year. She has appeared at gas utility companies, gas industry expositions, home shows, and women's clubs on behalf of the national sponsors of the Mrs. America contest.

Homemakers selected to represent their states in the Mrs. America national finals will receive an all-expense-paid round trip to and two-week vacation in Fort Lauderdale for themselves and their husbands.

A color film showing the Mrs. America national finals and the cooking and home-making events using gas appliances will be produced by Paul Hance Productions, Inc., on location. Prints of the film will be available to gas utility companies and national sponsors of the contest for the coming year.

The state winner who annexes the crown of the nation's top homemaker will receive the following prizes in addition to the \$30,000 home, which will be fully landscaped, furnished, and equipped for year-round living: the RCA-Whirlpool Mrs. America gas kitchen, including Whirlpool's Gold Star gas range, gas refrigerator, freezer, washer-dryer, automatic dishwasher, waste disposal unit, vacuum cleaner, and supply of kitchen cabinets; an ultramodern bathroom, equipped with Crane Criterion plumbing and "launderette"; a \$6,500 Lancer lifetime Fiberglas swimming pool, complete with filter accessories; a Culligan soft-water appliance; a savings bond; and an assortment of home beauty products from Toni. She and her family will receive a two-week all-expense-paid vacation in Fort Lauderdale, Fla., during the summer of 1961.

GAMA delegates elect officers, anticipate \$9 billion sales

AT THE 25TH ANNUAL meeting of the Gas Appliance Manufacturers Association (GAMA) held March 30 through April 1, 1960, in White Sulphur Springs, W. Va., Edward A. Norman, retiring president of the group, told 500 delegates that combined gas industry revenue, including utility gas, bottled gas, and appliance sales, will top \$9 billion this year. Mr. Norman, linking the figure with expected new housing starts, predicted the gas appliance sales volume will reach \$2,723 million in 1960. He stressed the gas equipment industry's decision to continue its war on obsolescence in homes, plants, and institutions but emphasized that it has no intention of resorting to "forced obsolescence," the mere changing of model numbers and the creation of a perennial headache for distributors and dealers, without giving them something truly new to sell.

During the three-day convention, the association elected new officers for the coming year. Wendell C. Davis, president of Cribben and Sexton Co., Chicago, Ill., was elected president of GAMA to succeed Mr. Norman, who is president of Norman Products Co., Columbus, Ohio. Other new officers include William G. Hamilton, Jr., president of American Meter Co., Philadelphia, Pa., who was elected first vice president; John F. Ray, vice president in charge of sales for General Controls Co., Glendale, Calif., who became second vice president; and Stanley H. Hobson, chairman of the board of Geo. D. Roper, Corp., Rockford, Ill., who was re-elected treasurer. Harold Massey, GAMA's managing director, is secretary of the trade group.

Highlights of the program for the three-day meeting at The Greenbrier included a general session luncheon whose theme was "Your Husband's Business: A Better Woman's

World." Lee H. Bristol, director of public relations for the Bristol Meyers Company addressed the session on "Brainstorming for Better Living."

Thursday morning's general session breakfast heard A. G. A. staff members in a presentation presided over by A. G. A.'s managing director, C. S. Stackpole. Wister H. Ligon, A. G. A.'s president, spoke, as did Frank C. Smith, chairman of the A. G. A.

Gas Industry Development Committee. On Friday morning, the association heard an address by W. H. Dalton, managing director of the Canadian Gas Association. Eighteen product divisions of GAMA elected division officers and executive committees during the annual meeting. The manufacturer delegates of 13 divisions elected totally new slates to serve during 1960, and five divisions renamed 1959 incumbents.



Newly elected president of GAMA, Wendell C. Davis (left) accepts the president's gavel from outgoing president Edward A. Norman. Mr. Davis had been first vice president of the 550-member organization.

Williams elected president of New England Gas Association



Officers of the New England Gas Association in front row are, left to right, Gilbert J. Williams, incoming president; George R. Copeland, retiring president; Harold L. Dalbeck, first vice president. In back row are John F. Rich, second vice president; Burdette A. Johnson, treasurer; Clark Belden, clerk.

THE NEW ENGLAND GAS ASSOCIATION, at its annual meeting in March, elected Gilbert J. Williams, executive vice

president and a director of The Connecticut Light and Power Company, as its new president.

Washington Natural honors builder



George Bell, who was among those to help the government in drafting the new Housing Act, proudly displays the Blue Flame plaque award.

THE SPECIAL Blue Flame award of the Washington Natural Gas Co., Seattle, Wash., was recently presented by Washington's governor, Albert D. Rosellini, to George Bell, of Bell and Valdez, Pacific Northwest building contractors.

The presentation was made at the Seattle Chamber of Commerce on the final day's activities of the statewide observance of Nat-

ural Gas Week, which was attended by industry leaders from all parts of the U. S.

The award was given in recognition of Bell and Valdez' outstanding contribution to Washington's home building industry and for its part in assisting the rapid development of the natural gas industry in Washington. As a leader in the home building industry, Bell was one of 15 builders invited to Washington, D. C., to assist the government in drafting the new Housing Act, which was passed by Congress in 1959. He and his organization have received editorial recognition in national magazines.

Virginia Electric and Power cited

VIRGINIA Electric and Power Co., Richmond, Va., has received the 1960 citation made by The Bank of Virginia in its annual program of salute to Virginia industry.

Virginia's Governor J. Lindsay Almond, Jr., and Governor Luther H. Hodges, of

Compressor completed for Pacific utility

COMPLETION of a \$200,000 compressor installation has marked the beginning of the injection of natural gas produced from other areas into the Pleasant Creek storage field of the Pacific Gas and Electric Co., San Francisco, Calif.

The engine, assembled on a hilltop near the center of the 400-acre storage area, has a capacity of 240 horsepower. It can force gas into the partially depleted gas field through two well pipes each about one-half mile deep.

Also elected for terms of office at the Boston meeting were Harold L. Dalbeck, president, gas division of New England Electric System, 1st vice president; John F. Rich, president, New England Gas & Electric Association, 2nd vice president; and Burdette A. Johnson, treasurer, New England Gas & Electric Association, treasurer.

Retiring president is George R. Copeland, president, Algonquin Gas Transmission Company.

On the program at the meeting were talks by Clark Belden, NEGA managing director; Mr. Copeland; Ellen Bridges, A. G. A. Home Service counselor; Dr. Carl C. Byers, inspirational lecturer; E. A. Norman, Jr., president, GAMA; Wister H. Ligon, president, A. G. A.; Christy Payne, Jr., manager market development, Consolidated Natural Gas System; R. J. Rutherford, president, Worcester Gas Light Co.; Fred W. Batten, vice president, Columbia Gas System Service Corp.; Oakah L. Jones, vice president, Canadian Gas Association; and Chester M. Alter, Chancellor, University of Denver.

Awards were presented to winners of an NEGA gas industry slogan contest. Top award of \$100 went to Ralph F. Goddard, Portland Gas Light Co., for his slogan, "Gas is dependable, silent, and clean. From base ment to attic, gas is supreme."

Six other cash awards also were presented to contestants.

A.G.A. exhibit praised

THE EDUCATIONAL SERVICE Bureau of A. G. A. exhibited its school materials on gas at the annual convention of the National Science Teachers' Association, held recently in Kansas City, Mo.

Twelve science kits from the bureau's growing list of educational materials were displayed in a large double booth manned by Ray Cooper, A. G. A.'s Southern regional manager.

Of the four or five hundred science teachers who visited the booth a large proportion said they were already using A. G. A. school material and praised it.

North Carolina spoke during the dinner program.

The utility has been cited for significant contribution to the economic progress of the commonwealth and to that part of the South in general.

A portion of the gas injected will remain as a permanent "cushion" to prevent the intrusion of water that would damage the minute cells in porous layers of earth where the gas is naturally held. Pressures of up to 1,250 pounds per square inch will be maintained at full capacity.

Working capacity of the field initially will be 1.2 billion cubic feet and ultimately will be 3.25 billion cubic feet. The gas will be used to meet peak demands on the system's load.

Space agency studies Texas Eastern man's proposal for gas rocketry

PROVING THAT natural gas is as modern as any fuel on the market and that natural gas men are constantly looking into the future is a new invention designed to utilize natural gas in launching rockets, missiles, and space ships.

The novel technique, tabbed "GATO" (Gas Assisted Take Off), was developed by F. Vinton Long, project engineer for Texas Eastern Transmission Corp., Shreveport, La., and chairman of the A. G. A. Operating Section's communications and telecontrol committee.

GATO was submitted by Mr. Long to the National Aeronautics and Space Administration. This agency rejected the proposal, but only after long and extensive study of its possibilities.

James A. Hootman, secretary of NASA's invention and contributions board, announced the agency's decision in a detailed letter to the inventor, saying that it would be a major undertaking to develop GATO to a point where its system would compete with present and projected booster vehicles.

Mr. Long believed that GATO would help alleviate some of the problems found in present rocket propulsion launchings from surface launching pads. He felt it would abolish the requirement of the enormous thrust necessary to lift the missile off the pad and away from the earth with reasonable speed. He also thought it would eliminate the need for extra fuel, which provides the thrust and adds weight to the pay load.

Mr. Long's invention, for which a patent is pending, would operate like a high-pressure, large-diameter natural gas pipeline and would utilize a version of a pipeline cleaning device known as a "pig" or scraper, which is pushed through the line by gas pressure. A section of tubing similar to a pipeline would be placed in the ground at an angle desirable for launching. A launching cradle, corresponding to the scraper, would be inserted into the tube. The bottom portion of the scraper would be equipped with rubber or other semi-flexible material to provide a seal between pig and tube walls. Instead of brushes on the forward portion of the



Congressman Overton Brooks (D-La.), right, chairman of the House committee on science and aeronautics, talks with F. Vinton Long, of Texas Eastern Transmission Corporation, about Long's new invention known as "Gas Assisted Take Off" or "GATO." Mr. Long has sought to patent GATO

scraper, a metal or plastic-fingered cradle would hold the missile in place and prevent it from scraping tube walls. Inexpensive construction would make the cradles expendable, and they would drop off as the missile emerged.

GATO has these three variations:

1. The missile could be pushed out by gas pressure, which would be provided at various points along tube walls. This would take advantage of the huge reservoir of high-pressure gas readily available from pipelines or adjacent underground gas storage fields.

2. A combination of compressed air (the prime starting force) and appropriate quantities of compressed natural gas could be used. The mixture would be injected at points along the tube and would burn after the scraper has passed, causing expansion for acceleration.

3. With compressed air or gas as the prime force, the missile could be fired at a given point in the tube. By the time it

reached the surface, the cradle would have dropped off and the missile have gained momentum. Extra fuel conserved would buy pay load or maneuver fuel.

The NASA calculated that an 18 per cent fuel saving would result from the use of a shaft about one mile in depth.

Summing up NASA's position, Dr. Hootman wrote, "Some studies have been made . . . regarding the requirements for doubling the pay load of a given booster vehicle by accelerating it with a constant force—a most desirable method from a structure weight standpoint. To meet such an objective, a tube . . . 10 miles long is required if we subject the vehicle to typical missile loads. The length could be reduced to one mile if we would allow the loads . . . to increase by a factor of 10 . . . such an amount would require so much added structural weight that performance would be degraded, and we could not achieve the objective of doubling the pay load."

New oven bakes twice as fast without damaging food quality

THE DESIGN and performance of an experimental commercial deck baking oven, which bakes most foods in half the time needed by conventional baking equipment, is described in a recent publication issued by the A. G. A. Laboratories. Research Bulletin 81, *High Speed Deck Oven Design and Baking Studies*, Part I, "The Polythermic Oven," reports progress in studying gas-fired portable deck bake oven design with consideration of proper oven environment for a selected group of food products. This PAR plant research at the A. G. A. Laboratories is a continuing study sponsored by the A. G. A. Committee on Industrial and Commercial Gas Research.

For the purpose of this research, an experimental deck bake oven was designed and constructed to furnish almost every conceivable combination of baking chamber atmosphere heating methods and hearth heating

methods, including rate and direction of hot air flow. This is accomplished with a blower-powered external heat transfer system rather than an integral combustion chamber from which heated flue gases and air travel to the baking deck by gravity flow. From time to time, conventional deck bake ovens have included design features permitting changes in the proportion of hearth and deck air—or "top"—heat; but the experimental oven was designed to be far more flexible than any known previous design in terms of possible heat applications. For this reason, it has been named the "polythermic" oven from the Greek meaning many heats.

Baking characteristics of the polythermic oven for 13 selected products are fully described in the bulletin. These products are considered representative of batters, doughs, foams, and pastes and include hearth rye

bread and cheese souffles, the latter to represent desserts like baked fruit whip.

Baking results with the polythermic oven indicated that most baked products can apparently withstand much higher heat transfer rates than are conventionally employed, without concurrent deterioration in quality. In addition, polythermic oven baking is about twice as fast as conventional baking with all the lightest loads, such as sugar cookies.

A gas-fired commercial baking and roasting oven based on the heat transfer principles demonstrated by this work was recently introduced by an equipment manufacturer and is reportedly receiving good acceptance.

The author of this research bulletin is T. E. Hampel of the A. G. A. Laboratories. Copies may be obtained from A. G. A. Headquarters or the A. G. A. Laboratories, 1032 East 62nd St., Cleveland 3, Ohio, at \$2 each.

Carbon dioxide purging ends danger in industrial repairs

THE HAZARD of a serious explosion during welding repair of combustible-gas vessels is being removed by a growing industrial technique—carbon dioxide purging.

Recently, when an eight-foot-diameter downcomer pipe at Chicago's south works of U. S. Steel Corporation needed repair of a

crack, engineers purged the container with 48,000 pounds of carbon dioxide and left an inert atmosphere. The repair was completed safely in about six hours.

The downcomer removes blast furnace gas, which is about 27 per cent carbon monoxide, for use in other parts of the mill as com-

bustible gas. During the recent operation, carbon dioxide was introduced in the downcomer to displace carbon monoxide at the point of repair.

Carbon dioxide is used to purge natural gas lines and coke oven gas pipes, according to H. V. Williamson, director of research for the Cardox division of Chemetron Corporation, which supplied the engineering service and carbon dioxide for the U. S. Steel operation. Purging with other materials, such as steam, does not always cause the remaining gas in containers to become inert and often causes condensate to run out of breaks.

Steam may condense and actually draw air into the system, creating an explosive atmosphere, before the operation is finished. Other methods, some using inert gas, are inefficient and difficult to apply.

Underground corrosion course scheduled

THE FIFTH ANNUAL Appalachian Underground Corrosion Short Course General Committee has announced there will be 12 field demonstrations covering products and equipment conducted at this year's course to be held June 1, 2, and 3, 1960, at West Virginia University, School of Mines, Morgantown, W. Va.

Scheduled also are educational movies on

corrosion and 40 exhibits on corrosion materials and equipment.

There will be 34 classes covering basic, intermediate, and advanced fundamentals of corrosion; public water systems; pipe coatings; instruments; and special topics. Corrosion testing field demonstrations will be held.

A registration in excess of the 520 students who attended last year's course is expected.

Highlights of cases before the Federal Power Commission Bureau of Statistics, American Gas Association

Certificate cases

● Cities Service Gas Co. has filed a proposed \$10.5 million expansion program to meet the increased requirements of its existing customers. Facilities are to be constructed over a three-year period, from 1960 through 1962, and will include the development of the Alden storage field in Rice County, Kans., the addition of 29,750 horsepower in compressor capacity, and a 2.7-mile loop of the Kansas Hugoton pipeline. These facilities will enlarge sales capacity by 145,000 cubic feet per day. The previously certificated Denton and Ferguson storage projects are now believed not to be feasible.

● Kansas-Nebraska Natural Gas Co., Inc., has filed a budget-type application to facilitate the securing of new natural gas supplies when available. The total cost of the facilities to be constructed will not exceed \$1.5 million, with single projects limited to \$250,000.

● Manufacturers Light and Heat Co. has proposed to construct 87 miles of pipeline at an estimated cost of \$6.9 million. This project is a continuation of the program to replace old- and small-diameter pipelines with large-capacity pipelines to serve more adequately the increasing demands of its Pennsylvania customers.

● Mississippi River Fuel Corp. has filed an application for the construction of natural gas facilities designed to develop the St. Jacob Field in Illinois as an underground storage reservoir. These facilities, estimated to cost \$3.2 million, include a 2,500 horsepower compressor station, lateral pipelines, injection and withdrawal wells, and appurtenant equipment.

● Ohio Fuel Gas Co. has sought authority to construct and operate about 21 miles of pipeline in Ohio to replace a similar amount of small-diameter lines. The pro-

posed construction, to cost \$1.2 million, will assume adequate service to existing markets. The company also has proposed to construct and operate a distribution system in the town of North Robinson, Ohio.

● Peoples Gulf Coast Natural Gas Pipeline Co. has received approval of its budget-type application to construct natural gas facilities, as needed, to attach new gas reserves. Each project is limited in cost to \$375,000, and the over-all cost of all projects will not exceed \$1.5 million.

● Transwestern Pipeline Co. has proposed construction of natural gas facilities, as needed, to secure new gas supplies. Single projects will not exceed \$500,000, and the cost of all projects is limited to \$3 million.

● Trunkline Gas Co. has also filed a budget-type application to aid in securing new gas reserves with the over-all cost not to exceed \$1.5 million. Cost of a single project is limited to \$400,000.

● United Gas Pipe Line Co. has applied for permission to construct and operate natural gas facilities, estimated to cost \$16.9 million, to enable it to attach newly acquired reserves in the Bastion Bay area of Louisiana. The company proposes to purchase up to 120 million cubic feet of natural gas daily from the Gulf Oil Corp. and the Tidewater Oil Co. combined.

Rate cases

● Colorado Wyoming Gas Co. has been ordered to refund nearly \$2.6 million, including interest, to its customers. The refund covers the period from February 5, 1958, through February 25, 1960, and includes amounts refunded by its supplier, Colorado Interstate Gas Co.

● El Paso Natural Gas Company's proposed annual wholesale natural gas increase

has been suspended until August 25, 1960, when it may be put into effect, subject to refund. Approximately \$488,000 of the increase affecting industrial users is not under suspension. The \$20.7 million under the suspension order would affect 34 customers in California, Arizona, New Mexico, and Texas. Two former rate increases totaling nearly \$42 million continue to be collected, subject to refund.

● Lone Star Gas Co. has had its 27.3% or \$1.3 million annual wholesale natural gas rate increase suspended until July 1, 1960. The proposed increase would apply only to the Natural Gas Pipeline Company of America and is principally based on increases resulting from the operation of favored-nation provisions in supplier contracts.

● Mississippi River Fuel Corp. has made application for a proposed \$2.6 million or 8.2% annual wholesale natural gas rate increase. The increase would affect 15 wholesale customers in Arkansas, Missouri, and Illinois. In support of its filing the company claimed higher purchased gas costs; increases in wages, salaries, taxes, and the cost of capital; and the need for an 8% rate of return. Currently being collected, subject to refund, is a previously suspended increase amounting to \$4 million annually.

● Natural Gas Pipeline Company of America had its \$1.2 million or 1.5% annual wholesale natural gas rate increase suspended until July 1, 1960. This filing is based solely on the increase proposed by Lone Star Gas Co., a supplier.

● Panhandle Eastern Pipe Line Co. has made application for a \$7.1 million or 6.1% annual wholesale natural gas rate increase. The proposed increase would affect 61 customers in Kansas, Missouri, Illinois, Indiana, Ohio, and Michigan and would be in addition to three former increases, totaling \$27.8 million, currently being collected,

subject to refund. The new filing is based on higher purchased gas costs, including purchases from Trunkline Gas Co., a subsidiary.

• Trunkline Gas Company's proposed \$5.4 million or 8.4% annual wholesale natural gas rate increase has been suspended until July 1, 1960, when it may become effective, subject to refund. Including parent Panhandle Eastern Pipeline Co., 25 other wholesale customers in Louisiana, Mississippi, Tennessee, Illinois, Kentucky, and Michigan would be affected. A previously suspended increase amounting to an annual \$9.6 million is being collected, subject to refund. This filing is to cover adjustments in gas purchase costs excluded from the previous filing.

• United Gas Pipe Line Co. has had all but \$224,000 of its proposed \$11.6 million or 10.3% annual wholesale natural gas rate increase suspended by the FPC. The non-suspended portion amounts to \$224,000 and affects only industrial users. The increase has been suspended until August 13, 1960, when it may be collected, subject to refund,

from 50 wholesale customers in Alabama, Florida, Louisiana, Mississippi, and Texas. The proposed increase is needed to offset increases in the cost of purchased gas and the claim to a 6 1/4% rate of return. In another action, an FPC presiding examiner concluded the company should exclude \$10 million in gas plant acquisition adjustments from its rate base and be allowed a 6 1/4% rate of return, in lieu of the requested 7 1/2%. He rejected a proposed method of rezoning the company's system and allocating costs between jurisdictional and non-jurisdictional customers. The net effect of these rulings would be to disallow nearly \$6.5 million of the company's total proposed \$16 million annual increase as presented in two rate filings dating back to 1955 and 1956.

SUMMARY OF INDEPENDENT GAS PRODUCER RATE FILINGS—FEBRUARY, 1960

	Number	Annual Amount
Tax rate increases allowed without suspension	2	\$ 3,156
Other rate increases allowed without suspension	65	186,535

Rate increases suspended	141	3,798,618
Total rate increases	208	3,988,309
Tax rate decreases allowed without suspension	2	557
Other rate decreases allowed without suspension	—	—
Total rate decreases	2	557
Total rate filings (all types)	619	—
Total rate filings acted on from June 7, 1954, to February 29, 1960	45,252	—
Rate increases disposed of after suspension (during February 1960)	150	1,461,478
Amount allowed	—	597,446
Amount disallowed	—	—
Amount withdrawn	—	864,032
Rate increases suspended and pending as of February 29, 1960	3,187	\$159,563,545

• In another FPC action, the Southwestern Virginia Gas Transmission Co., Baltimore, Maryland, has been exempted from regulation under the Natural Gas Act, pursuant to the terms of the Hinshaw Amendment. This makes a total of 125 companies to be exempted, either fully or in part, since the Hinshaw Amendment became effective March 27, 1954.

Tanker carries equivalent of 112 million cubic feet of gas

BECAUSE of the growing interest in sea transport of liquefied natural gas, the following is reprinted from the 1959 annual report of the Continental Oil Company.

"During 1959 the feasibility of the systems developed by Constock for handling and transporting liquefied natural gas was conclusively demonstrated. After undergoing exhaustive trials, the *Methane Pioneer*, an experimental tanker and the first of its kind ever built, completed six successful trips from the pilot liquefaction plant and loading terminal near Lake Charles, Louisiana, to Canvey Island near London, England. On each of these trips, the *Methane Pioneer* carried full loads of 32,000 barrels of liquid methane at a temperature of minus 258° F., equivalent to 112 million cubic feet of natural gas.

"An interest in Constock International Methane Ltd. was acquired by the Royal Dutch Shell Group in January, 1960. As part of the transaction, Continental reduced its former 50 per cent interest in Constock International Methane to 40 per cent but retained a one-half interest in certain assets not included in the deal. The other participants in the venture are now the Royal Dutch Shell Group (40 per cent) and the Union Stockyard and Transit Company of Chicago (20 per cent). . . . The new combination will be known as Conch Interna-

tional Methane Ltd. Available to it will be Constock's technical developments, market contacts, and know-how, together with Shell's world-wide marketing experience. This new association is expected to expedite and implement the commercial development of liquefied methane on a world-wide basis.

"Conch International Methane Ltd. is currently negotiating gas purchase and sales agreements. It is anticipated that contracts will be let shortly for the construction of a full-scale liquefaction plant and for the construction of large methane tankers to supply liquid methane to the United Kingdom."

Mid-West Gas Association elects new officers



The Mid-West Gas Association chose new officers at its annual convention held in March at St. Paul, Minn. Three of the officers are, left to right, C. J. Math, Iowa-Illinois Gas and Electric Co., first vice president; J. S. Mayer, Northern States Power Co., president; J. J. Finnegan, Northern Natural Gas Co., secretary-treasurer. Absent from photo is K. W. Person, Minneapolis Gas Co., second vice president

Brazilians study labor-management relations at Equitable



Equitable Gas Company employees share a joke with Brazilian trade unionists. At left, Walter Irwin, credit manager, and E. J. Ferguson, general commercial manager, tell Miss Martin, an interpreter, about a woman who called to say she was out of gas and wanted the company to send out another meter.

A.G.A. issues list of publications for month of May

INDUSTRIAL AND COMMERCIAL

- Why I Specified Gas Air Conditioning, by A. G. A. Sound slide film. \$50 each; additional prints, \$25 each. Cat. no. 42 C.
- Gas Versus Electricity as a Fuel. Reprint of article from *Air Engineering* of January, 1960. Nine cents each. Cat. no. 91/I.
- Patterns of Training Commercial and Industrial Sales Representatives, by Hayes Walter, Information Letter No. 112. First 25 copies, free; 26 or more copies, 25 cents each. Cat. no. 90/I.
- Spheric Gas Burner Ports, by E. J. Weber. Research Bulletin 79. \$2.50. Cat. no. 129/DR.
- Gas Company Experiences with the Experimental High Performance Burner, by F. G. Hammaker. Research Bulletin 80. \$2. Cat. no. 130/DR.
- Noise Abatement at Gas Pipeline Installations, Volume II—Noise Suppression at Pressure Regulating and Metering Stations, by James M. Sharp, Glenn Damewood, Cecil R. Sparks, and Miles T. Hanchett. \$3.50. Cat. no. 32/PR.

STATISTICS

- Potential Attainable Market for Gas Appliances, 1960-1964, by the A. G. A. Marketing Research Committee. Free. Cat. no. 61/S.
- Monthly Bulletin of Utility Gas Sales, January, 1960. \$1 per year by subscription. Cat. no. 60/S1.
- Sources of Appliance Sales Data. A chapter in the *A. G. A. Marketing Research Handbook*. Free. Cat. no. 59/S.
- Proved Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas, December 31, 1959, Volume No. 14. Free. Cat. no. 62/S.
- Quarterly Report of Gas Industry Operations, Fourth Quarter, 1959. Free. Cat. no. 20d/S.

RESEARCH

- Relations of Fundamental Flashback, Blowoff, and Yellow-tip Limits of Fuel Gas-air Mixtures to Design Factors of Burners in Gas Appliances, by Joseph Grumer, Margaret Harris, and Valeria Rowe. \$2. Cat. no. 128/DR.
- Minimizing Lint Stoppage of Atmos-

pheric Gas Burner Ports, by E. J. Weber. Research Bulletin 79. \$2.50. Cat. no. 129/DR.

- Gas Company Experiences with the Experimental High Performance Burner, by F. G. Hammaker. Research Bulletin 80. \$2. Cat. no. 130/DR.
- Noise Abatement at Gas Pipeline Installations, Volume II—Noise Suppression at Pressure Regulating and Metering Stations, by James M. Sharp, Glenn Damewood, Cecil R. Sparks, and Miles T. Hanchett. \$3.50. Cat. no. 32/PR.

ACCIDENT PREVENTION

- Safety Siftings, Volume V, March, 1960, No. One, by A. G. A.'s Accident Prevention Committee. Digest of articles from gas company safety bulletins. 10 cents each to non-members. To members, one copy free; more than one copy 10 cents each. Cat. no. 44a/AP.
- How Injuries to Gas Men Might be Avoided, Volume IX, March, 1960, Issue I, by A. G. A.'s Accident Prevention Committee. Accident case histories. 10 cents each to non-members. To members, one copy, free; two to 50 copies, 10 cents each;

51 to 99 copies, seven cents each; 100 to 500 copies, five cents each. Cat. no. 43 a/AP.

LABORATORIES

- Directory of Approved Appliances and Listed Accessories, January, 1960 (semi-annual issue). 75 cents each. Annual subscription, \$2; monthly supplements, 10 cents each.

EDUCATIONAL

- History of Natural Gas, by Burnett Cross. Revised edition of educational comic book. One to four copies, five cents each, postage prepaid; five copies or more, 2½ cents each, postage prepaid. Cat. no. ED-18.

ACCOUNTING

- Customer Relations Training Package. \$150. Cat. no. 4/A.

NEW FREEDOM

- Ovens in New Gas Ranges Do More than Cook. Reprint of an article from *American Home* magazine. Three cents each. Cat. no. 71/K.

Workshop for utility executives planned

THE NINTH ANNUAL Utility Management Workshop will be held at Arden House of the Harriman Campus of Columbia University, Harriman, N. Y., from July 24 to August 5, 1960. The workshop, designed to train men to replace top executives in the utility industry, will be limited to 36 participants. Applications will be considered in the order of their receipt and cancellations accepted until June 15, 1960.

Total cost of the program is \$1,000, which covers tuition, materials, books, room, and board. The fee is to be paid by the sponsoring company upon acceptance of its nominee to the 13-day program.

Some of the topics for study will be: Stereotype of the Job of Manager; Goal Formation, Forecasting, Organization Planning, and Policy Expansion; Communication, Information, and Sessions; and Corporate Persistence.

Station operates by remote control

THE SUCCESSFUL OPERATION of an offshore pipeline compressor station by remote control with microwaves was recently related at a convention session of the American Society of Civil Engineers.

William E. Matthews IV described the operations at the Olga compressor station in the marsh regions bordering the Gulf of Mexico at a point about 50 miles south of New Orleans and five miles east of the Mississippi River. It is operated by Southern Natural Gas Co., of Birmingham, Ala.

The company felt a compressor station in the inaccessible location would not permit unattended operation. The solution to the problem was the use of a microwave system to transmit control signals originated at the company's Toca compressor station.

With the remote-control system, according to Mr. Matthews, the operating personnel at Toca is able to start, stop, and control the speed of each engine at Olga. It can call for

any desired selective telemetry of pressures, temperatures, and engine speeds. A further provision is made for operation of certain key pipeline valves, an emergency station shutdown system, and for changing the governor control from remote to local.

Problems of pipeline engineers in effecting crossings of the lower Mississippi River to deliver natural gas from the southwest to northeastern markets were also outlined at the convention.

There are no general rules and data for the crossing of the Mississippi by pipelines, Leo M. Odom, engineer, told the gathering.

The relative stability of the river and, therefore, the cost of a dependable crossing changes greatly within a comparatively short length of the river due to variations in the erodibility of the banks, to the location of revetments, and to the characteristics of the flow pattern, facts well recognized within the pipeline industry.

Brooklyn Union plans new building

THE BROOKLYN UNION GAS CO., Brooklyn, N. Y., has announced plans to raise a 14-story office structure in Brooklyn on a site opposite the \$200 million Brooklyn Civic Center.

The proposed construction is part of a

program to revitalize downtown Brooklyn and will adjoin a four-story structure that has been planned to harmonize architecturally with the main building. The units are expected to be ready for occupancy by December, 1961.

Lamps get weekly service



A gas serviceman attends to one of 23 gas lights installed as part of 1959 Bi-centennial Celebration in Pittsburgh, Pa. The lamps are manufactured in London for Equitable Gas Company of Pittsburgh

Engineers will discuss economics of engine power at meeting

THE OIL and Gas Power division of the American Society of Mechanical Engineers will meet for its 32nd annual conference and exhibit May 22 through 26, 1960, at the Muehlebach Hotel in Kansas City, Mo. The theme of this year's conference is "Economics of Engine Power."

On the technical program scheduled for

the conference is a presentation by Robert S. Jefferies, of New York State Natural Gas Corporation, titled "Horsepower to Heat the Nation." There will also be a series of three-minute briefs on new developments in the industry by representatives of exhibiting manufacturers. The series, "What's New?", will be moderated by John E. Onnen, of

Koppers Company.

On the program for presentation of awards is a speech by W. C. Fischer, of Fairbanks, Morse and Company, titled "Production Design of a Modern, Axial Flow, Positive-Displacement Rotary Compressor." A special lecture, "Automation in the Gas and Oil Industry," will be presented.

Natural Gas Week proclaimed by governor of Washington

THE IMPACT of natural gas on the industries and people of the State of Washington was realized during the week of March 20 through 26, 1960. That week was designated for the first time in the state's history as Natural Gas Week. The Honorable Albert D. Rosellini, governor of Washington, made the proclamation in recognition of the growing importance of natural gas, which made its first appearance in Washington in 1956.

Sponsored by the Association of Washington Gas Utilities and El Paso Natural Gas Co., El Paso, Texas, Natural Gas Week began with the governor's statement, which said in part:

"The natural gas industry has provided a new source of energy for the people of . . . Washington and has made major contributions to the growth and development of our state."

Advertising by the gas companies comprising the Association of Washington Gas Utilities (Cascade Natural Gas Corp., Columbia Gas Co., Northwest Natural Gas Co., Olympic Gas Co., Pacific Natural Gas Co., Washington Natural Gas Co., and Washington Water Power Co.) appeared in newspapers throughout the state, strongly supported by editorial matter.



Washington's Governor Rosellini signs the proclamation of Natural Gas Week. Watching are, left to right, Francis Pearson, chairman, Washington Public Service Commission, Charles M. Sturkey, president, Washington Natural Gas Co., Seattle, Wash., a member of group that sponsored celebration

Gas industry publishes annual reports for 1959

ACH YEAR the A. G. A. MONTHLY publishes summaries of the annual reports it receives from associations, utilities, pipeline companies, and manufacturers in the gas industry. These capsule reports will be presented alphabetically here and in subsequent issues.

● **Arkansas Louisiana Gas Co.**, Little Rock, Ark., reported that expansion of utility operations, including gathering, transmission and distribution of natural gas, the acquisition of new supplies, and expansion of public utilization of gas, progressed at a satisfactory rate in 1959. The company has viewed the period 1957 through 1959, during which more than 4,000 gas air conditioning units were installed on the system, as the prelude to an era when gas-fired year-round home equipment will achieve large-volume public acceptance. Dramatic evidence of the effect of air conditioning, gas lights, and small appliances has been the shift in the company's "summer valley" on residential and commercial sales. The low point has shifted on the calendar from July and August in 1954 to May in 1959. To strengthen the competitive position of natural gas, a direct merchandising program was inaugurated in 1959, with special emphasis on modern gas built-in ranges for the new-home market. As in other sales efforts, employees played a major part in the undertaking. Ten product shows were conducted to inform employees of the advantages of gas-burning equipment.

The Company's subsidiary, **Arkla Air Conditioning Corporation**, developed five new models in their Gaslite line, making it the most complete line of quality outdoor lighting equipment. To be offered in 1960 is the ambient Gaslite control, which generates its own electric energy to operate a gas control valve from the heat of the gas flame. During daylight hours the gas is automatically turned down to a small bypass flame. As darkness arrives the gas valve automatically reopens, restoring light to full-flame operation. Increased emphasis on distribution of the corporation's new Gasign is planned for 1960. The product, introduced late in 1959, gave the gas industry another appliance for gas utilization.

● **Colorado Interstate Gas Co.**, Colorado Springs, Colo., announced a sharp increase in annual gas sales volume from 191.9 billion cubic feet in 1954 to 299.2 billion cubic feet in 1959. Gas supply acquisitions have during the past five years more than kept pace with expanding market requirements. The principal expansion project of the company involves strengthening of the Rocky Mountain area transmission facilities and sales to El Paso Natural Gas Company for the Southern California market. Operations under two significant new contracts commenced during 1959. The U. S. Bureau of Mines began to process helium from gas reserves in the company's Keyes Field of Oklahoma, and two oil companies began extraction of liquid hydrocarbons from the

firm's gas reserves in another area of Oklahoma. Full effect of the contracts will be reflected in 1960's operating results.

● **Consolidated Edison Company of New York, Inc.**, New York, N. Y., reported a significant change in the season of the peak load on their electric system. Previously peaks had come in winter. In 1959 the peak day was reached on September 9. For some time the company's load had been increasing in the summer about twice as fast as in winter. Because the total summer load has remained less than the winter's, it has been necessary to add only enough capacity to provide for the relatively slow winter growth. For this reason, the company had long been able to handle a great deal of load growth with relatively low expenditure for generating capacity. But now that the peak is firmly established in the summer, it will have to install capacity for the rapid growth of that season. Thus, future expenditures for generating facilities will necessarily be increased by comparison with the past few years. In gas construction, the company, which now distributes mainly natural gas, reported most expenditures were made for distribution facilities required to supply the growing load. The use of gas for residential, commercial, and industrial purposes was pushed in 1959, with the result that more than 18,000 new installations were made, of which nearly 17,000 were for space heating and water heating. Gas is now the favorite fuel among builders of one- and two-family homes in the company's gas area. The company reported the purchase price of the New York City subway power plant properties, including interest, will amount to \$125,000,000. The sum will be paid in three annual installments, the last due on August 1, 1962. It was concluded by the company that the interruption of service to Con Edison's electric customers on August 17, was an extraordinary occurrence, a coincidence of several power failures in a short period of time. The report of an investigation by the technical staff of the Public Service Commission confirmed these conclusions.

● **Controls Company of America**, Schiller Park, Ill., during 1959 improved its sales and industry position in all its major product lines. The firm continued its program of diversification within the controls industry with the establishment of a new division in the switch field and entrance into the semiconductor field. Record sales exceeded 1958 sales by 42 per cent. The earnings increase over the previous year was 65 per cent. All of the company's established operations contributed to profits, with the exception of the Milwaukee Valve Company, which was disposed of during the year. Recognizing that the future growth of Controls Company will continue to depend upon engineering accomplishments and the development of new products, Solid State Electronic Controls, Inc., was established and given status early in 1960. As foreign sales continued to grow in 1959, Controls Com-

pany increased its sales and engineering personnel in Europe and expanded its plant in Holland to twice its former size. A program to construct a manufacturing plant in France is underway.

● **Fitchburg Gas and Electric Light Co.**, Fitchburg, Mass., showed net income was about the same for 1959 as for the comparable period in 1958. Earnings per share of common stock showed a very slight increase as compared to earnings for the previous year. A gain of approximately \$98,000 in gas revenues was due mainly to increased commercial and industrial sales and the use of more gas for heating. There was an increase in operating expenses due to additional purchases of natural gas and electric power. Area construction supplied an improvement in the business outlook. The company received permission to provide gas service to a portion of Lunenburg, Mass., contiguous to its present gas franchise area in Fitchburg.

● **Greeley Gas Co.**, Denver, Colo., even before the end of 1959, had established new highs in net income and total operating revenues. This upward trend continued in spite of setbacks in the national economy. With the extension of natural gas service to Piper, Kans., in 1959, the company's distribution system includes 36 communities. Throughout the year Greeley installed a record quantity of 3-inch (equivalent) pipe—almost 40 miles—in order to serve new customers and improve service to existing users. Progress in 1959 included major above-ground construction too. To keep pace with the present and projected growth rate of the Kaw Valley district, a modern new sales and service office building was constructed in Bonner Springs and leased by the company. In Greeley a large garage-storage building was constructed on additional land purchased at the district's warehouse site. A total expenditure of \$443,800 was required for these and other improvements, new services, and expansion.

● **Laclede Gas Co.**, St. Louis, Mo., once again showed the effect of annual weather variations in its reported earnings. With weather seven per cent warmer than in the 1958 fiscal year, earnings declined to \$1.10 as against \$1.30 for the year before. The latter represented the highest earnings in the company's history. During 1959 a total of 19,650 heating customers were added. Of these about 11,000 were conversions to gas heating in existing homes from systems powered by other fuel sources. Presently 57 per cent of the company's residential customers use gas for space heating. The company has a second underground storage site under development and during 1959 negotiated for a supply of propane for peak shaving use. Property improvements and extensions necessary for serving new customers and delivering increased volumes of gas required expenditures of \$11.5 million, the second largest annual volume of

construction expenditures in the company's history.

● Long Island Lighting Co., Mineola, N. Y., marked its 49th year of corporate life by continued growth in revenues, net income, customers, and physical properties. The year 1959 was an outstanding one for the company's gas business, with increased purchases of natural gas, including storage service. Sales of gas for space heating were up 29 per cent. The company, in its 50th year of public service, can recall when gas was produced at many small local plants scattered throughout its service area. Today, these plants have been retired, and the company's more than 320,000 gas customers are supplied with dependable natural gas after its 1,860-mile journey from Texas and Louisiana. In 1910, meter readers covered their routes by bicycle and construction crews used horse-drawn wagons that were often hired from the local livery stable. Today the firm has an automotive fleet of more than 1,400 vehicles.

● Middle South Utilities, Inc., New York, N. Y., observing the tenth anniversary of its incorporation, reported a 7.4 per cent increase in net income and a 7.7 per cent increase in earnings per share. The growth of the system's operations reflects the area's progress toward diversification of economy. Among the highlights of the growth in the past decade were extensive investments in basic industries, development of Tideland oil and gas fields, increased mineral produc-

tion, and farm diversification. Since 1949 the Middle South has led the nation in new discoveries of crude oil, natural gas, and natural gas liquids.

● Minneapolis Gas Co., Minneapolis, Minn., claimed favorable weather chiefly responsible for 1959 earnings equal to \$2.16 per share of common stock, compared with \$1.69 for the previous year. Other factors in the improved earnings were the addition of new customers, rate adjustment, and new operating efficiencies. More than 6,500 new customers were added in 1959, with indications of an equal number being added for the coming year. Retirement of the company's gas manufacturing plant, birthplace of the Minneapolis gas industry in 1870, is expected to be completed in 1961. Production capacity of the plant has been replaced by modern propane facilities. In sales promotion, the emergence of Minnegasco, the Indian maiden with the blue-flame feather, highlighted the year. The advertising emblem was introduced to the public through a revitalized and intensified advertising program. Gas cooking schools were a popular feature of the firm's community service program, attracting 25,000 women to 51 sessions in 1959.

● Mountain Fuel Supply Co., Salt Lake City, Utah, last year, despite limited exploration funds, carried out an aggressive exploratory program by interesting other companies in drilling some of its prospects in return for an ownership interest. Although this procedure enabled the company

to pursue an extensive program at moderate cost, it tended to dilute the company's ownership interest in newly discovered reserves. In the future, in view of the Public Service Commission's approval of the company's projected exploration program, the company will be able to do more of its own exploratory work and will retain a greater share of control. The company's increase in residential and commercial gas sales in 1959 is attributable to more customers and somewhat colder weather. For the first time in the firm's history, more gas was sold to residential and commercial users than to industrial consumers, indicating the success of the company's sales efforts in those areas. Reported among Mountain Supply customers this year is the Capitol building of the State of Utah.

● National LP-Gas Council, Chicago, Ill., reported that growing industry appreciation of tangible benefits received from membership was reflected by a substantial 18 per cent increase in industry dollar investment in the council program during 1959. As the backbone of the council's consumer promotion program, 54.4 per cent of the total budget was spent on national, regional, and state-level advertising to increase the market for modern LP-Gas service and appliances. A \$25,000 all-LP-Gas home as a top prize, plus more than \$100,000 worth of national advertising and dealer sales aids combined to give council members their most powerful and productive local-level sales promotion in the 10-year history of the council.

Restaurateurs see gracious dining in gaslight renaissance

CORDIAL GASLIGHT and gracious dining, standards of bygone elegance, have again become the mode of imaginative Americans. Enterprising restaurateurs have discovered that romantic gas lamps can sometimes steal the spotlight from even the traditionally picturesque candle.

One such entrepreneur is Gus T. Gulas, proprietor of the The Gaslite, a cafe in Birmingham, Ala. The dining and dancing spot, located in a renovated warehouse on Birmingham's only cobblestone street, has been decorated in a style reminiscent of the New Orleans French Quarter. Less than a block from raucous traffic and but half a mile from an industrial blast furnace, the cafe is a haven of quaint and quiet dining by the glow of thirty gas lights.

Mr. Gulas, who opened The Gaslite on December 11, 1959, has found his cafe so successful that he is remodeling an adjacent warehouse to accommodate his expanding clientele. For the year-round comfort of his guests, he is having installed 15 tons of gas air conditioning.

Dining in the gaslight manner has not been limited to the venture in Birmingham. Farther west, in Dallas, Texas, restaurant owner Paul Holm has capitalized on the charm and opulence associated with the gaslight era and has opened a glittering restaurant called the Gaslite Club. The Texas-size specialty of the house is a "Diamond Jim Brady and Mistress" dinner that costs \$100 per plate.

In New York, N. Y., the Gaslight Cafe has for 11 years been a favorite of those who seek an unusual setting for dining hours. In Greenwich Village, the new O'Henry's Restaurant uses gaslight to accent the gay-nineties atmosphere of a converted butcher shop, where the tables are

chopping blocks and waiters wear spanking white butchers' aprons and straw boaters. Even the coffee-house circuit has joined the gaslight parade. In the Village's Macdougal Street, nostalgia with a continental touch comes right along with each cup of espresso at the Gaslight coffee house.



The Gaslite, a cafe in Birmingham, Ala., invites the passer-by with warmly glowing gas lamps. Owner Gus T. Gulas has found the cafe he converted from a warehouse so popular that he has added gas air conditioning for his customers' comfort and plans an expansion of the cafe in an adjoining warehouse

Gas home heating installations reach 100,000



William G. Hamilton, Jr. (r.), president of American Meter Company, presents gold-plated gas meter to H. N. Ramsey, executive vice president of Philadelphia Electric Company, to celebrate the utility's 100,000th gas home heating installation. J. Henry Long, vice president for gas operations, looks on

Battelle Institute plans comprehensive study on cooling systems

A BROAD research program to identify cooling systems that may improve the over-all effectiveness of ground-based U. S. Air Force electronic equipment has been initiated at Battelle Memorial Institute, Columbus, Ohio. The one-year study, authorized by the Air Research and Development Command's Rome air development center, will cover established

and experimental refrigeration techniques.

Under consideration will be such devices as high-speed centrifugal compressors, Peltier cooling units, and the Stirling and azeotropic cycles. Battelle specialists in refrigeration, combustion, thermodynamics, fluid dynamics, heat transfer, physical chemistry, solid-state physics, organic chemistry, and electronics

Fold-away goes to sea



Shipboard KP is more fun when there is more space. Two-burner Dixie Fold-away takes up less than one square foot of space on this cruiser galley and is balanced to raise and lower easily

Compact cars to be used

THE COLUMBIA GAS SYSTEM plans to acquire 800 U. S. compact automobiles and thereby save \$340,000 in fleet acquisition and operating costs in the next four years. Under the system's vehicle-replacement policy, it will require four years for the 800 cars to be integrated into the fleets.

It has been estimated that compact cars will give about five extra driving miles per gallon of gasoline. Thus, savings on gasoline should be about \$18,000 in 1960 and \$72,000 annually by 1963.

Western group meets

THE ROCKY MOUNTAIN Gas Association, of Denver, Colo., at a recent meeting heard Don Harter, chief building inspector of the City and County of Denver. Mr. Harter spoke on fire safety in school construction in the Denver area. The film "Our Lady of Angels School Fire" was shown.

A subsequent meeting of the association held on April 26, 1960, was devoted to gas and sanitation. Program chairman was Franklin Fiske, director of the Division of Environmental Sanitation of the Denver Department of Health and Hospitals.

Energy institute scheduled for July

THE FIRST ENERGY INSTITUTE will be presented by the School of Business Administration of The American University on its campus in Washington, D. C., June 27 through July 1, 1960. The institute will deal with problems associated with not only the most spectacular source, atomic energy, but also natural gas, coal, petroleum, and water power, all of which must continue to play major roles in the world's applications of energy.

Washington Natural cites safe drivers

A. G. A.'s Curtis Morris is a member of the advisory group assisting institute director, Dr. Arthur L. Rayhawk, who says:

"Concentrating, as they must, upon the development and progress of their own segment of the energy situation, executives and officials may not realize what the total energy picture actually is. . . . The energy institute is designed to feed a comprehensive picture to representatives of all segments."

Pipeline will supply Los Angeles basin

SAFETY-DRIVING AWARDS have been presented to 114 drivers for the Washington Natural Gas Co., Seattle, Wash. Fifty drivers received one- and two-year awards, and 64 received citations for three years or better.

The company operated 200 vehicles a total of 1,750,000 miles during 1959. Avery Wil-

lis, safety director of Washington Natural Gas Co., attributed part of the success of the company's safety program to the increased use of cars with all-around visibility and the replacement of small panel trucks by passenger cars, including a number of the new compact cars.

mately \$19 million, is expected to be completed before August 1, 1960.

The new pipeline will permit delivery into the Los Angeles basin of an additional 300 million cubic feet of gas daily. The new gas supplies will be available at Newberry from pipeline facilities now being built by Pacific Lighting Gas Supply Company to receive out-of-state gas from Texas.

Aero-dist may eliminate months of preliminary engineering

TWO NEW SURVEYING instruments have been developed for the civil-engineering profession, each designed to crack a variety of preliminary engineering problems.

One, the "Aero-dist," is a device for measuring ground distances from the air. It will enable surveyors to carry lines across bodies of water or to jump over areas of inaccessible terrain to establish ground controls for construction of pipelines, power plants, highways, and irrigation schemes in remote places. Thus, months may be cut off preliminary engineering jobs.

The Aero-dist consists of a master unit to be carried by a light plane or helicopter and two or more remote units on the ground.

The airborne master unit would be flown across the nonintervisible line between the two stations transmitting microwaves simultaneously to both units. As the plane approached the line and crossed it, a series of measurements to each remote unit would automatically be recorded at the master unit. The line between ground stations would show up as the shortest distance.

The other instrument, the "Hydro-dist," is a device to measure distance from land to sea points. It may be used to provide continuous location data to construction men on offshore projects. Heretofore, it has been difficult to maintain precise location of offshore work because traditional surveying instruments de-

pend upon visibility, and fog between job and shore stations could force delays. The new radar-like instrument is unhampered by fog. The Hydro-dist is also able to provide continuous location of a moving vessel, and thus is expected to expedite offshore oil exploration.

Both devices are electronic systems, based on the principle of the tellurometer system, introduced two years ago for general overland surveying. A series of high-speed impulses are transmitted from a small master unit at one point to a remote unit at the other point. The time it takes the microwaves is recorded in billionths of seconds, then translated into miles, feet, and 10ths of feet.

Natural or LP-Gas-powered air conditioning announced

DEVELOPMENT of new natural gas or LP-Gas-powered air conditioning systems for residential or institutional use has been announced by the Gas-cool division of Vector Engineering Contractors, Inc., Dallas, Texas. Models currently available are 5-ton and 7½-ton capacities, with optional carburetion for use with natural gas or LP-Gas.

Expenses of operation are said to be as much as 61% less than those for comparable all-electric systems.

The average fuel requirement is only 20 cubic feet of 1,000 Btu natural gas per ton-hour of operation. LP-Gas fuel consumption is less than 1/5 gallon per ton-hour. At 100° F. ambient temperature, the 5-ton models

have a rated capacity of 60,000 Btu per hour at 40° F. suction and 68,500 Btu per hour at 45° F. suction. The 7½-ton models have a rated capacity of 90,000 Btu per hour at 40° F. suction and 100,000 Btu per hour at 45° F. suction.

Gas-cool is powered by the Continental engine developed under the PAR program of A. G. A. It is factory-tested to produce 10,000 hours of trouble-free operation before any major repairs are needed.

The Gas-cool systems feature easy installation, either outdoors or roof-mounted, requiring but two simple connections to the cooling coil in the duct system. Single-phase electric service suffices; engine-starting re-

quires only standard 230-v. 20 amps.

Gas-cool also features completely automatic thermostatic temperature control and an extremely low operating noise level. This latter feature is due to the design of the Fiberglass-insulated cabinet and special muffler installation. In addition, four moulded neoprene rubber vibration dampeners are between the engine-compressor assembly and the steel base for quieter, smoother operation.

In addition to the 5-ton and 7½-ton models, 10-ton, 12½-ton, and 15-ton models will be available soon. For further information, write to Gas-cool Division, Vector Engineering Contractors, Inc., 3210 Elm St., Dallas 26, Texas.

NEGEA plans building

PLANS HAVE BEEN ANNOUNCED by the New England Gas and Electric Association, Cambridge, Mass., for the construction of a new, million-dollar, five-story office building near Central Square in Cambridge.

The new structure, which will have approximately 45,000 feet of office space, will be centrally heated by gas and completely air-conditioned. It will serve as headquarters for the utility system and will contain offices of the NEGEA Service Corp., which provides various professional and technical services for the operating companies of the association.

Columbia Gas augments automation

THE COLUMBIA GAS System recently took the first step toward construction of a four-state, 470-mile microwave communication system, designed for 240 communication channels. It is being installed as part of a broad automation program of the system.

The microwave system will provide Columbia Gas operating companies with voice communication, a teletypewriter service, facsimile facilities for telemetry, supervisory control, and data communication.

In this system, a completely synchronous installation, all the carrier frequency generation equipment is "locked" to a master oscillator, with provisions for any Columbia Gas station to take over the role of master station in the event of partial system failure.

Caloric and expert plan stylish kitchens



Beatrice West, New York color consultant, and Norman Denny, builder of the new Sutton Terrace apartments near Philadelphia, discuss plans for the color styling of the Caloric-equipped apartment kitchens

THE CALORIC Appliance Corp., Jenkintown, Pa., in cooperation with nationally famous color consultant Beatrice West, will contribute beauty and practicality to the kitchens of 175 new apartments in suburban Philadelphia. Builder Norman Denny realized the importance of kitchen styling to the housewife, who must sometimes ac-

cept less than the best styling in the room where she spends a large part of her day.

In the Sutton Terrace apartments in Lower Merion, Pa., there are Caloric built-in ovens, countertop ranges, and sinks. Other equipment includes washers, dryers, dishwashers, garbage disposal units, and refrigerators.

Personal and otherwise

Philadelphia Electric's general counsel becomes director

VINCENT P. McDEVITT, vice president and general counsel of Philadelphia Electric Co., Philadelphia, Pa., was recently elected a director of the company at the annual meeting of stockholders.

A native Philadelphian and vice president of the utility since 1949, he attended the Wharton School of the University of Pennsylvania before matriculating at Temple University's law school. He was admitted to the bar in 1928, one year before his graduation, after

New firm names officers

THE BOARD of directors of Union Texas Natural Gas Corporation has elected officers of the new company resulting from a merger of Union Oil and Gas Corporation of Louisiana and Texas Natural Gasoline Corporation.

John T. Oxley, formerly president of Texas Natural Gasoline, has been named executive vice-president of Union Texas Natural Gas and Frank B. Markle, Wayne V. Jones, Daniel B. Lovejoy, and R. C. Frederick named senior vice-presidents.

Other officers and their titles are Maxwell L. Euwer, vice-president, producing operations; Harold G. Teverbaugh, vice-president, plant operations; Elliott H. Powers, vice-president, exploration; O. M. Bailey, vice-president, marketing.

Waste King, Cribben and Sexton form national marketing firm

ASSIGNMENT of regional, divisional, and district personnel in the eight geographic regions comprising the national marketing organization of Waste King Universal was made recently by A. L. Haggard, vice president-marketing.

Regional general managers were announced when Waste King Corp., Los Angeles, Calif., and its subsidiary, Cribben and Sexton Co., Chicago, Ill., revealed they would jointly market their product lines under the Waste King Universal banner. The managers are Jack Plano, Eastern; Fred DeRango, Central; J. G. (Jack) Schellenberg, Chicago; Joseph Lucas, Midwestern; Joseph Vale, Southeastern; Stanley Rudnick, Southwestern; Milton Shaw, Western; and Ed Craven, Pacific.

Sales managers and other key staff members, working under the direction of the general managers, will be responsible in their respective areas for the marketing of all household and commercial appliances manufactured by Waste King and Cribben and Sex-

Michigan Consolidated promotes executives

MICHIGAN CONSOLIDATED Gas Co., Detroit, Mich., has named three of its northern district executives to new posts.

James C. Preston has been appointed general manager of the utility's operations in central and northern Michigan. Mr. Preston, who started with the company in Detroit in 1949 and held engineering posts in the street department, has been manager in Cadillac, Mich., for three years. He is a graduate of Michigan State University.

Reno J. Maccardini has been promoted from northern districts engineer to assist gen-

which he engaged in general legal practice.

Mr. McDevitt was appointed assistant district attorney of Philadelphia in 1935 and for ten years was identified with that office.

He is chancellor of the Philadelphia Bar Association, a member of the Pennsylvania and American Bar Associations, a past governor of the American Bar Association, and a former chairman of the public utility section of the latter organization.

Mr. McDevitt is a commissioner of Fair-

mount Park Commission and a member of the executive committee and board of managers of The Beneficial Saving Fund Society of Philadelphia and the board of consultants of Villanova University's law school.

Other directors elected by the utility were Charles E. Brinley, A. S. Corson, John A. Diemand, Walter D. Fuller, A. A. Garthwaite, H. N. Ramsey, R. G. Rincliffe, Harold S. Schutt, Philip T. Sharples, and G. Stockton Strawbridge.

Robertshaw names public relations director

BEVERLEY L. BRITTON was recently appointed director of public relations for the Robertshaw-Fulton Controls Co., Richmond, Va.

Mr. Britton until recently was manager of the news bureau of the division in Baltimore, Md., of The Martin Company. Previously, he was director of public relations, advertising, and promotion at Jamestown Festival Park, near Williamsburg, Va. Prior to that he served for more than

16 years with the U. S. Navy, primarily in public relations assignments. He now holds the rank of captain in the naval reserve.

A graduate of the University of Richmond, Mr. Britton attended Harvard University in 1952 and 1953 as an Associate Nieman Fellow.

Ligon elected Rotary head

A. G. A.'s PRESIDENT, Wister H. Ligon, was recently elected president of the Nashville Rotary Club of Nashville, Tenn., at the annual conference of Rotary District 676. He succeeds William D. Trabue III. Mr. Ligon, who is president of the Nashville Gas Company, will take office in July, 1960.

ton. Their assignments according to region are as follows:

Eastern region: division sales managers—Frank Isabelle, New England; Walter Young, metropolitan New York; Richard Conley, Pennsylvania, Delaware, New Jersey; and William O'Connell, western New York. District sales coordinators—Richard Belliveau, Hartford, Conn.; and William M. Roberts, Philadelphia, Pa.

Central region: division sales managers—Albert Bradtke, Michigan; Thomas L. Schwesinger, northern Ohio; George Dalton, southern Ohio, Indiana, Kentucky; and Paul Williams, Pennsylvania, West Virginia. District coordinator for consumer relations—Laona Scott.

Chicago region: regional advertising and promotional manager—Andrew Bavas. Division sales managers—Harold Jalass, apartment construction, and Thomas Mulcahy, jobber-distributor.

Midwestern region: division sales man-

agers—William Pierson, northern Illinois, Wisconsin, Upper Michigan; Paul Shell, Kansas, Missouri, southern Illinois; and Wesley Van Gorder, Iowa, Nebraska, Minnesota, and the Dakotas.

Southeastern region: division sales manager—George Chinsley, Florida.

Southwestern region: regional sales manager—James Marcus, Jr. Division sales managers—George Porteck, Texas; and Jerome Berkowitz, Rocky Mountain area, Oklahoma, Texas panhandle.

Western region: consumer relations supervisor—Elaine Blacher. Sales administrator—William Peak. Division sales managers—George Kelley, southern California, except San Diego and Imperial counties, and Clark County, Nev.; and William Spillane, San Diego and Imperial counties and Arizona. District sales coordinator—Charles (Lee) Brady.

Pacific region: division sales manager—Marshall Gibbs, northern California.

Bertolette retires as chairman of board at Hartford

NORMAN B. BERTOLETTE recently retired as chairman of the board of The Hartford Gas Co., Hartford, Conn., at the directors' meeting following the annual stockholders' meeting. He will continue as a member of the board of directors.

Mr. Bertolette brings to a close a distinguished career of nearly half a century in the utility business. A graduate of Drexel Insti-

tute of Technology in mechanical engineering in 1911, he became associated with the Philadelphia Suburban Gas and Electric Co.

When that company and others were merged into Philadelphia Electric Company in 1925, Mr. Bertolette assumed an important executive position with the latter firm. In 1930 he was elected president of the Harrisburg Gas Company, from which he re-

signed to assume the presidency of The Hartford Gas Company in 1935. He was elected chairman of the board in 1957.

He is a former president of the Connecticut Electric and Gas Association and past president of the New England Gas Association.

Mr. Bertolette, active in A. G. A. for many years, was 1959 chairman of the Laboratories Managing Committee.

Northern Indiana Public Service re-elects three to board

WALTER A. McDONOUGH, James S. DeLaurier, and Walter W. Walb have been re-elected to three-year terms as directors of Northern Indiana Public Service Co., Hammond, Ind.

Mr. McDonough, vice president and con-

troller of the company, has been a director of the utility since 1949. Mr. Walb, vice president of the American Hoist and Derrick Co., Fort Wayne, Ind., was first elected a director in 1946, while Mr. DeLaurier, publisher of the *Hammond Times*, was first

elected a director in 1956.

Other directors of the company, whose terms have not expired, are Dean H. Mitchell, Rollin M. Schaher, Clarence W. Bader, Col. Walter J. Riley, Charles H. Albers, and J. Samuel Hartt.

Schlink retires after 56 years with Central Illinois Light

T. A. SCHLINK, chairman of the board of directors of Central Illinois Light Co., Peoria, Ill., has retired after 56 years of loyal service to the firm and its predecessor companies.

Mr. Schlink started working for the Peoria Gas and Electric Company in 1904. Hired at the age of 14 to unpack fixtures in the merchandise sales department, he ran

errands, delivered mail, and performed other messenger jobs. He advanced to report clerk in 1906 and was given the responsibility of keeping electric customers' accounts. He later became general bookkeeper.

In 1912, at the age of 22, Mr. Schlink was elected treasurer of the Peoria Gas and Electric Company. When Central Illinois Light Company was organized in 1913, he became

the first treasurer. He advanced to secretary-treasurer in 1927. That same year, he was elected to the board of directors and has been a director ever since.

In 1940 he was named vice president and secretary. Eleven years later, in 1951, he was elected president and general manager. He was elected chairman of the board of directors in 1956.

Hans Jordan, A. M. Anderson appointed to newly created posts

PROMOTION of Hans Jordan to the newly created position of vice president-engineering counsel and appointment of A. M. Anderson to the new post of vice president-appliance engineering for Waste King Corp., Los Angeles, Calif., were recently announced.

Dr. Jordan's assignment will be to provide the president, vice president-appliance engineering, and other members of the executive staff with engineering counsel concerning the total interests of the corporation and independent of its direct line engineering activities.

Dr. Jordan has been Waste King's chief engineer since the corporation was founded in 1946, playing an important role in the design of its household appliances and commercial garbage disposers. He was elected vice president-engineering in 1957. Prior to Waste King's formation, he was chief engineer in

charge of engineering and manufacturing for Given Machinery Company, Los Angeles.

Mr. Anderson, a 16-year engineering veteran, formerly headed the engineering program for Hotpoint's laundry department. His earlier advanced technical engineering assignments with General Electric were in the fields of missiles, atomic energy, industrial equip-

ment, and appliances. In addition, he had the corporate responsibility for the program of development and training of all young engineers employed by GE divisions.

Mr. Anderson will be directly responsible for the total appliance engineering and development program at Waste King and its subsidiary, Cribben and Sexton Co., Chicago, Ill.

Lifesavers honored at Northern Natural



National Safety Council President's Medals are presented to employees of Northern Natural Gas Co., Omaha, Nebr., by W. A. Strickland (r.), executive vice president of the firm. Joseph J. Svoboda (l.) resuscitated the infant victim of a highway crash, and C. W. Owens (c.) revived a child who had fallen into a pool. The medal recipients learned artificial respiration methods in company-sponsored programs.

Foster promoted



W. J. Foster

W. J. FOSTER has been appointed vice president and director of sales of the Geo. D. Roper Corp., Kankakee, Ill.

Mr. Foster has been associated with Roper for over 30 years. Previously he served as vice president in charge of Roper's eastern division. He joins two other

Roper veterans, E. Carl Sorby, vice president, merchandising, and Norman C. Kreuter, vice president, sales, in directing Roper's national sales organization.

Expansion of the latter organization is planned as part of a program to expand appliance and LP-Gas dealer outlets.

Names in the news—a roundup of promotions and appointments

UTILITY

William J. Simione, formerly assistant office manager of the New Haven Gas Co., has been promoted to office manager. He has succeeded **George S. Lees**, who retired recently after 38 years of service to the firm.

Anthony J. Demse has been appointed assistant to the president of North Shore Gas Co. A registered professional engineer, he was employed formerly in New England and in Milwaukee, Wis., with the Milwaukee Gas Light Co.

At Northern Indiana Public Service Co., **James D. Breed**, manager of the firm's all-gas Elkhart district, has become manager of the electric-and-gas Goshen district. He has succeeded **W. Dean Shannahan**, whose voluntary retirement was recently announced. **Jack W. Stine**, the company's Columbia City district manager, has filled the post left vacant by Mr. Breed. **Paul E. Seybert**, division supervisor of industrial power sales in the firm's Michigan City division, has been named manager of the South Bend district, succeeding **Daniel O. Kreitzman**, who formerly functioned in a dual capacity as manager of the South Bend and St. Joseph Valley districts.

At Consumers Power Co., retiring **Dan E. Karn** will be retained by the company as a consultant. Mr. Karn will become chairman of the finance and budget control committee, succeeding **Justin R. Whiting**, former chairman of the board and president, who will retire from this chairmanship. Mr. Whiting will continue as a director.

Edward E. Anthony has been appointed assistant manager of the southern division of New Jersey Natural Gas Co. Mr. Anthony, who joined the company in 1948 as a clerk, was appointed district manager in the company's offices in Long Branch and Keyport two years ago.

Harry T. Heupel has been promoted to transmission superintendent with the Pittsburgh Group companies of the Columbia Gas System. He has succeeded **R. E. Grant**, who retired recently following 43 years with the utility. Mr. Heupel will supervise

Tuohy named chief executive officer

JOHN J. TUOHY, president of Long Island Lighting Co., Mineola, L. I., N. Y., has been designated chief executive officer by the firm's board of directors. Errol W. Doebler, who was chief executive officer until this development, continues as chairman of the board.

Mr. Tuohy joined the company as attorney in the legal department in 1945 and was elected president and a director in 1957. From 1954 to 1957 he was vice president in charge of sales, promotion, publicity, and employee relations. Before that he was assistant to the president.

Mr. Doebler was graduated from Cornell University, with a degree in civil engineering, in 1915. He joined the firm in 1927 as commercial manager of the company and its affiliates. He was appointed vice president in 1941, a director in 1945, and chair-

man of the board and chief executive officer in 1957.

In another action at the annual meeting of shareholders, Fred C. Eggerstedt, Jr., assistant vice president in charge of the finance department, was elected a vice president of the company. Mr. Eggerstedt has been with the firm since 1950. He was named assistant vice president in 1955.

Utility appoints Shearer

SYBIL HOUSEHOLDER SHEARER has been appointed home service director at Washington Natural Gas Co., Seattle, Wash. The new "June Holladay" (a company *nom de plume*) received a bachelor-of-science degree from Iowa State College in 1941. She has been actively engaged at administrative levels in her profession since graduation.

gas-moving operations for more than 600 retail communities. He had been assistant transmission superintendent since 1955.

Philadelphia Electric Co. has named **Robert K. Brown** gas superintendent of its Delaware division. Mr. Brown has succeeded Lawrence T. Chambers, who recently retired. A chemical engineering graduate of Lehigh University, he served as gas transmission and distribution engineer at the time of his appointment.

Stephen H. Baer has been chosen to head personnel functions of Pacific Lighting Gas Supply Co., the transmission and storage subsidiary of Pacific Lighting Corp., in addition to his public relations duties. Mr. Baer, whose title will be public relations and employee relations director, joined the company in September, 1958.

Ralph S. Nabors, superintendent of Pacific Gas and Electric Company's 502-mile "super inch" natural gas pipeline, has been named general superintendent of pipeline operations for the firm. **Harry P. Prudhomme**, superintendent of the northern division of pipeline operations, has succeeded Mr. Nabors as super-inch chief, with the title of superintendent of transmission and compression. **Robert W. Brooks** has been named to replace Mr. Prudhomme at the northern division. **Richard I. Stark**, a senior transmission engineer, has assumed Mr. Brooks' duties in San Francisco, while **Robert J. Knebel** has filled the position left open by Mr. Stark.

The Lone Star Gas Co. has appointed **Homer L. Payne** as assistant treasurer to succeed **John C. Bridges**, who retired recently. Mr. Payne began his career with the company as a clerk in the mail room, serving later as payroll clerk and then as assistant paymaster. In 1953 he was appointed sectional supervisor in the payroll section of the treasury department.

Francis M. Rudman has been promoted to superintendent of the street department of Michigan Consolidated Gas Co. Mr. Rudman joined the company as a cadet engineer in 1936, serving later as a foreman and general foreman of the department, superintendent of transportation, and, more re-

cently, as assistant superintendent of the street department.

Central Hudson Gas and Electric Corp. has announced three executive changes, including the naming of **Edwin T. Strong** to manager of the new business development division. Mr. Strong, who served as assistant to the vice president on special assignments, has succeeded **Robert B. Denhardt**, who retired recently. **Roland C. Becker**, who served as resident manager for the Poughkeepsie and central, northern, and eastern Dutchess County areas, has transferred to the position of assistant to the vice president. Mr. Becker joined Central Hudson in 1922. He was named Poughkeepsie district resident manager in 1954. **William E. Van Wagener** has succeeded Mr. Becker as district resident manager. He was the second recipient of Central Hudson's engineering scholarship to Rensselaer Polytechnic Institute in 1950 and was employed during summers by the company, rejoining it as eastern division power engineer after service in the air force.

MANUFACTURERS

Robert J. Foster has been promoted to eastern division manager of the Geo. D. Roper Sales Corp., replacing **W. J. Foster**, who was recently named vice president and director of sales for the organization. Prior to his appointment, the new division manager covered a major part of Pennsylvania for Roper. Also named to a new post was **Sol W. Weill**. As new eastern merchandising manager, he will assist Mr. Foster in setting up and executing merchandising programs for the division. Previously he was sales promotion manager for the eastern Roper organization.

Thomas W. Kirby has been named to the newly created position of special markets manager at the Airtemp division of Chrysler Corp. Mr. Kirby's duties will include direction of Chrysler sales in the export, automotive, government, contract, national account, industrial, and builder areas. He had been president and general manager of an

independent television and appliance distributing firm in Louisville, Ky., for the past seven years. From 1945 through 1953 he was district representative and division manager for the Philco Corp. at different times in Atlanta, Ga., San Francisco, Calif., and Pittsburgh, Pa.

The Welbilt Air Conditioning and Heating Corp. has appointed Milton Levine district sales manager in metropolitan New York and Westchester County. Mr. Levine was a sales representative for the Cold Wave Cooling Corp. before joining Welbilt. He represented Tower Engineering Co. prior to that. Frank G. Coon has been named as the company's St. Louis district sales manager. His territory includes Missouri, Kansas, Iowa, and parts of Illinois and Kentucky.

The Tappan Co. has advanced two of its sales executives. Robert B. Davis has been promoted to assistant general sales manager. He has been with the company for 11 years. David L. Shelley has been named to the new position of product manager in charge of Tappan's electronic range and of its refrigerator. Mr. Shelley had been assistant manager of built-in equipment since 1956. D. Thomas Webster, former manager of LP-Gas sales, has become product manager of the gas range division. Mr. Webster started with the firm in 1936 as a territorial manager. David C. Rainey has been named product manager of the electric range division. He was former manager of electric range sales and has been with Tap-

pan for 20 years. Martin V. Wolf has been appointed to the new executive position of manager of contract sales. His first position with Tappan was that of a sales correspondent in 1937. He began specializing in contract sales in 1956.

Spencer Rich has been appointed to the new position of director of commercial laundry equipment at the Norge division of Borg-Warner Corp. He will report to R. H. Quayle, Jr., Norge president. Since 1956, Mr. Rich had been president of the Rich Laundry Machinery Co., Grand Rapids, Mich., commercial laundry distributors for four Midwestern states.

At The Maytag Co., all nine members of the board of directors have been re-elected to their positions. They are Fred Maytag II, George M. Umbreit, E. G. Higdon, R. E. Vance, Charles A. Carey, N. Bernard Gustett, L. B. Maytag, H. F. O'Brien, and Cyril J. C. Quinn.

Francis A. Curry has been named community relations assistant in the public relations department of Rockwell Manufacturing Company. Mr. Curry was formerly headquarters personnel manager. He joined Rockwell in 1955 in the industrial relations department, in 1957 was promoted to wage and salary administrator, and since 1958 had been headquarters personnel manager.

A. Cave Richardson has joined the Chattanooga Royal Co. in an executive capacity. Mr. Richardson previously was with Combustion Engineering, Inc., where he spent 32

Elizabethtown Consolidated honors Manning on 50th anniversary

ELIZABETHTOWN Consolidated Gas Co., Elizabeth, N. J., recently honored Dennis J. Manning, consultant to the utility, at a dinner celebrating his 50th anniversary with the company. He will retire July 1, 1960.

Mr. Manning started as a chauffeur with the Elizabethtown Gas Light Company (as it was then known) and eventually became

assistant superintendent of distribution.

During his fifty years of service Mr. Manning has been the driving force behind many redesigns of mechanical tools and equipment for the gas industry. In 1959 he was nominated for the A. G. A. Achievement Award in recognition of his accomplishments. Mr. Manning holds numerous patents on de-

Group elects Vogel

H. HOLMES VOGEL, vice president in charge of the Chesapeake and Potomac Telephone Company in Washington, D. C., was elected president of The Maryland Utilities Association at its annual business conference held in Baltimore, Md., in April. Mr. Vogel succeeds Austin E. Penn, executive vice president of the Baltimore Gas and Electric Co. of Baltimore, who was elected a director for the next year.

Other officers elected to serve in the ensuing year are Bruce P. Wilson, of Baltimore and Annapolis Railroad Co., first vice president; Dale W. Barratt, of Baltimore Transit Co., second vice president; Raymond C. Breault, of Frederick Gas Co. Inc., treasurer; and Frank J. Little, of Chesapeake and Potomac Telephone Company of Maryland, secretary.

The directors chosen to serve are Charles P. Crane, of Baltimore Gas and Electric Co.; George B. Daniel, of Citizens Gas Co.; William S. Moore, of Eastern Shore Public Service Co.; Otis H. Ritenour, of Washington Gas Light Co.; Thayer B. Seese, of Conowingo Power Co.; and Robert W. Wilson, of Potomac Electric Power Co.

Moore appointed president of Colorado firm

COLORADO Gas and Oil Corp., Denver, Colo., has appointed H. D. "Ike" Moore president of its Derby Refining Company division, with headquarters at Wichita, Kans. He has also been named a director.

Mr. Moore is resigning as vice president and executive assistant to the president of

years. He left Combustion as executive assistant to the vice president of manufacturing for the corporation.

OTHER

Frank Freeland has joined the rate department of Commonwealth Services, Inc. His duties will involve all phases of rates and regulatory matters. During the past six years, Mr. Freeland had been an independent consultant to public utilities and also had served as an administrative officer for the U. S. Department of the Interior on special assignments.

Roland E. Flohr has been named assistant general manager of Solar Gas, Inc., and its associated companies. Mr. Flohr had been administrative assistant in charge of operations at Solar since 1958, having joined the company that same year as district manager of North Dakota.

Leo C. Gravis has been promoted to manager of exploration by Trunkline Gas Co. He had been chief geologist since he joined the company in 1956.

W. H. Rosser has been promoted to the newly created position of engineering section chief for Continental Oil Company's interstate gas sales activities. Formerly regional engineer for the firm's southern region, he continues to make his headquarters at Houston. Martin D. Rowe, Jr., southern region staff engineer, has been promoted to regional engineer, succeeding Mr. Rosser.

50th anniversary

vices for improving distribution techniques that have gained him national recognition.

His most recent invention, ELF, a device for electronically locating gas leaks, has gained him international fame. Details on this device have been featured in two foreign publications and requests for more information are pouring in from all over the world.

Letton promoted at Southern California



Harry P. Letton, Jr.

HARRY P. LETTON, Jr. has been elected vice president and general counsel for the Southern California Gas Co., Los Angeles, Calif.

Mr. Letton succeeds T. J. Reynolds, retiring vice president and general counsel, who first joined the company in 1922. The change became effective April 1, 1960.

Mr. Letton has served as general attorney

for the company since 1957 and in 1958 was elected to the board of directors. Before coming to the utility in 1951 as assistant general counsel, he was on the legal staff of American Telephone and Telegraph Company.

He is a graduate of the University of Nebraska School of Law and of Harvard School of Law.

Lawyer named director

JEAN RAYMOND, Q. C., president and general manager of Alphonse Raymond, Ltd., was recently elected to the board of directors of Quebec Natural Gas Corp., Montreal, Can., succeeding Joseph A. Page.

Dan E. Karn ends 45 years with Consumers



J. H. Campbell



A. H. Aymond, Jr.

THE retirement of Dan E. Karn after 45 years of service with Consumers Power Co., Jackson, Mich., has resulted in the election of two new officers by the firm's board of directors.

Aphonse H. Aymond, Jr., who was executive vice president, has become chairman of the board and chief executive officer. James H. Campbell has become president and chief operating officer. Mr. Campbell was senior vice president of the company, which has more than one million customers in a 64-county area.

Merriam named Northern Natural chairman

JOHN F. MERRIAM has been elected to the newly created position of chairman of the board and president of Northern Natural Gas Co., Omaha, Nebr. His former position was president. Mr. Merriam had held that position since 1950 and had been a director of

the organization since 1946.

In other action taken by Northern's director, Max A. Miller, a director of Northern for 17 years, was named to the newly created position of vice chairman of the board of directors.

Houston Corporation expands size of board of directors



J. M. Harbert



J. F. Robinson

J. FRENCH ROBINSON and John M. Harbert III were recently elected to the board

of directors of The Houston Corporation of Florida, increasing the number of directors from seven to nine.

Mr. Robinson has been prominent nationally in the natural gas industry for many years. He was president and a director of Consolidated Natural Gas Co., New York, N. Y., from 1943 until 1951 and was chairman of the board until his retirement in 1955.

Beginning his career as a geologist and engineer with The Peoples Natural Gas Co., Pittsburgh, Pa., and Hope Natural Gas Co., Clarksburg, W. Va., Mr. Robinson became a vice president of Peoples Gas Company and of Columbia Natural Gas Company in 1931, advancing to presidency and directorship of

The Houston Corporation in 1936. He also became president and a director of The East Ohio Gas Co., Cleveland, Ohio, in 1940 and chairman of its board in 1951. He is presently an executive consultant to Republic Steel Corp., Cleveland, Ohio.

Mr. Harbert in 1954 joined the original group planning to bring natural gas to Florida and became a founding stockholder of The Houston Corporation.

He has been prominent in the development of natural gas systems in Georgia and the Carolinas.

He is president of Harbert and Cargill, Inc., and Harbert Construction Corporation and is vice president of Mill Ridge Coal Company.

Foster and Willis elected vice presidents at Stone and Webster

STONE AND WEBSTER, Inc., Boston, Mass., has announced the election of Raymond C. Foster and Robert H. Willis as vice presidents of the firm.

Both had been assistant vice presidents since May, 1959, at which time they were transferred from subsidiaries. Mr. Foster moved from Stone and Webster Engineering Corporation, where he was engaged in engineering sales work. Mr. Willis moved from

Stone and Webster Service Corporation, where he was assistant to the president.

Mr. Foster joined the engineering corporation in 1946 as an engineer in the chemical division of the Boston office. He moved to the engineering corporation's headquarters in New York, N. Y., in 1954. He is a graduate of Massachusetts Institute of Technology.

Mr. Willis came to the service corporation in 1949 as a gas consultant, having prev-

iously served as an engineer for Ohio Gas Company and as plant engineer for Fall River Gas Company. In 1953 he became vice president and general manager and a director of Lake Shore Gas Company and Lake Shore Pipeline Company. In 1957 he returned to the service corporation's New York office as a financial consultant and in 1958 became assistant to the president. Mr. Willis is a graduate of Northeastern University.

Fred Maytag II named board chairman; Umbreit becomes president



G. M. Umbreit



F. Maytag II

FRED MAYTAG II has been named chairman of the board and chief executive officer

of The Maytag Co., Newton, Iowa, by the firm's board of directors. George M. Umbreit, who was executive vice president and treasurer, has succeeded him as president.

In concurrent changes, E. G. Higdon, who was vice president and comptroller, has been elected vice president and treasurer. N. C. Carlsen has been named to succeed him in the office of comptroller.

Mr. Umbreit will be responsible for operational direction of the company's affairs, while Mr. Maytag will be concerned primarily with policy matters.

The office of chairman, as a separate post, has been vacant since the death, in 1937, of F. L. Maytag, company founder and grand-

father of Fred Maytag. F. L. Maytag moved from president to chairman in 1921 and headed the company for 16 years.

Fred Maytag, 49, who last year became a member of the Maytag 25-year club, was named a vice president in 1936 and became president in 1940 after the death of his father, E. H. Maytag. Mr. Maytag's uncle, L. B. Maytag, was president 1921 to 1926.

Thus, Mr. Umbreit becomes the fifth president in company history and the first other than a Maytag. He joined the company in 1929 as auditor, became comptroller in 1932, and was elected vice president and a director in 1934. He became executive vice president and treasurer in 1940.

Caloric promotes three

CALORIC Appliance Corp., Jenkintown, Pa., has announced the promotion of three production executives at its Topton plant. Joseph P. Klein has been named plant manager. Joseph M. Langseth has moved up to the post of production manager, and Elmer Andersen has been promoted to superintendent of the press and tool and die departments.

Mr. Klein joined Caloric in 1950 and was production manager before being assigned to his new position. He is a graduate of Penn State University.

Since starting with Caloric in 1955, Mr. Langseth has held various supervisory posts in the Topton plant. Before joining Caloric he had extensive experience in the aircraft and appliance fields and was associated with Consolidated Vultee and with the Murray Corporation of America. Mr. Langseth attended Phillips University.

Mr. Andersen joined Caloric in 1952 as a production clerk and later advanced to supervisory positions.

Southern Indiana elects Woehler director

GEORGE R. WOELHLER, vice president and comptroller of Southern Indiana Gas and Electric Co., Evansville, Ind., has been elected a director of the company to succeed Edmund F. Ortmyer. All other directors were re-elected.

Mr. Woehler has been with the company

more than 40 years and has held numerous supervisory and executive accounting positions during that time. He is a director and second vice president of the Indiana Gas Association and is a member of the accounting division executive and general accounting committees of the Edison Electric Institute

OBITUARY

Wilbur W. German

a vice president of The Montana Power Co., Butte, Mont., died recently in Billings, Mont., after an illness of eight weeks. Mr. German, who was 56, had been in ill health for more than a year.

Born in Lincoln, Nebr., Mr. German received his early education in Washington, D. C.; Pittsburgh, Pa.; and Denver, Colo. He was graduated from Cornell University in 1928 with a degree in electrical engineering. He joined Montana Power in 1931 as gas utilization engineer. He was subsequently chief gas engineer, manager of the Butte division, and assistant to the vice president prior to his election as a vice president in 1957.

During his years in the industry he gained extensive experience in the production, transmission, and distribution fields. He represented Montana Power on several occasions at hearings in Montana, Canada, and Washington, D. C.

Surviving relatives include his wife, the former Marjorie Parker; a son; two daughters; and his parents.

William R. Hones

president of the Charles A. Hones Company, manufacturers of industrial gas furnaces and burners, died March 23, 1960, in Florida after a short illness. He was 63.

Mr. Hones, whose father founded the gas equipment manufacturing company, was known and respected by many in the gas industry. He had been president of the company since 1954.

Surviving are his wife, Muriel; a son; and two grandchildren.

R. E. Brooks

a pioneer in establishing the packaged boiler industry, has passed away in Milwaukee, Wis. He was 77.

He teamed with J. C. Cleaver in 1931 in founding the Cleaver-Brooks Company, originator and leading manufacturer of packaged boilers.

Mr. Brooks served as president of the Cleaver-Brooks Company in Milwaukee from 1931 until 1943, when Mr. Cleaver became president. At that time, Mr. Brooks was named chairman of the board and served in

that capacity until his recent death.

His most significant contributions were in the areas of sales, distribution, and company management. Under his direction Cleaver-Brooks operations expanded to include plants in Milwaukee and Waukesha, Wis.; Lebanon, Pa.; Springfield, Ill.; and Stratford, Canada.

The first packaged boiler installation was made in 1932 when Cleaver-Brooks was manufacturing mobile boilers to heat asphalt and road oils for highway construction. For the first 10 years of its existence, the company was practically the only producer of self-contained boilers in the United States. The old principle of a stationary boiler built on the job was firmly fixed in the minds of engineers. It was in this area of gaining acceptance for the new concept that Mr. Brooks' selling talents were widely utilized.

A native of Waverly, N. Y., Mr. Brooks was graduated from Colgate University in 1906. He was a director of the Koehring Company and of Columbia Hospital and a trustee of Colgate University.

Among his survivors is a son, James G. Brooks, vice president of Cleaver-Brooks.

Willis L. Lea, Jr.

vice president and general attorney for Southern Union Gas Co., Dallas, Texas, died unexpectedly April 9, 1960, while on a fishing outing with his family at Possum Kingdom Lake near Breckenridge, Texas.

Mr. Lea was widely known in oil and gas circles, particularly in Texas, New Mexico, Arizona, and Colorado. He had been prominent in his company's state-wide rate case in New Mexico that was pending at the time of his death.

A native of Fort Worth, Texas, he had lived in Dallas, Texas, since boyhood and was a graduate of Highland Park High School. He attended Southern Methodist University and the University of Texas, where he received his law degree.

Mr. Lea entered law practice in Dallas in 1935 with the firm of Thompson, Knight, Baker and Harris and joined Southern Union's legal staff in 1936. He was elected assistant secretary of the company in 1938 and was named general attorney in 1945. He had been vice president since 1955.

Survivors include his wife, a daughter, two sons, and a brother, Ross B. Lea.

Raymond H. Lewis

general sales manager for the Buflovak equipment division of Blaw-Knox Co., Buffalo, N. Y., died April 12, 1960. He was 52.

Mr. Lewis had been associated with the company for 25 years and had been general sales manager since 1957.

CONVENTION CALENDAR

1960

JUNE

1-3 •Texas College of Arts and Industries, Short Course in Gas Technology, sponsored by Southern Gas Association, Kingsville, Texas.

6-7 •A. G. A.-Pacific Coast Gas Association (Manufacturers section), Research and Utilization Conference, Miramar Hotel, Santa Monica, Calif.

13-15 •American Society of Heating, Refrigerating, and Air Conditioning Engineers, Annual Meeting, Vancouver, B.C., Canada.

21 •A. G. A. Board of Directors, The Homestead, Hot Springs, Va.

20-23 •National Association of Plumbing Contractors, Annual Meeting, Cleveland, Ohio.

22-25 •Canadian Gas Association, Annual Meeting, Manoir Richelieu Hotel, Murray Bay, Quebec, Canada.

27-28 •Michigan Gas Association, Grand Hotel, Mackinac Island, Mich.

28 •American Home Economics Association Convention, Denver, Colo.

AUGUST

17-19 •Mid-West Gas Association, Gas School and Conference, Iowa State College, Ames, Iowa.

SEPTEMBER

12-14 •Accident Prevention Conference, Minneapolis, Minn.

15-16 •A. G. A. Textile Processing Symposium, Sedgefield Inn, Greensboro, N. C.

21-23 •Southeastern Gas Association, Annual Meeting, Sir Walter Hotel, Raleigh, N. C.

21-23 •Pacific Coast Gas Association Meeting, Westward Ho Hotel, Phoenix, Ariz.

23 •Oklahoma Utilities Association, Gas Division Conference, Biltmore Hotel, Oklahoma City, Okla.

Personnel service

SERVICES OFFERED

Gas Fuel Graduate—Southern Technical Institute, unit of Georgia Tech., two years' previous experience, desires position in engineering or management. Age 23, single, draft exempt. Prefer location in southeast. 1978.

Comptroller—had responsibility since 1944 for all accounting, treasury and corporate secretarial functions including budgeting, financing systems and procedures, taxes and special studies in a medium-size gas utility. Detailed resume on request. 1979.

Public Relations Director—experience all phases of public relations. Sound approach to community and customer relations. 1980.

Personnel Manager—practical experience in recruiting, interviewing, hiring, and training. Can relocate. 1981.

Woman Engineer—French, seeks position in gas industry. Two years experience in research and design of ventilation and of different uses of gas. New York location. Technical translations: English, French, Italian, German, Spanish. Translating work also accepted at home. 1982.

Aggressive, personable, technical background, B.S., two years graduate work (geology, geophysics, mining engineering), age 24, seeking position that demands effort, offers challenge. Trained for geological exploration but will consider technical sales, other positions. Resume upon request. Available April. 1983.

June, 1960 graduate, Gas Fuel Technology Dept., Southern Technical Institute (unit of Georgia Tech). Prefers job in technical sales or engineering. Age 27, married, one child. Will relocate. 1984.

Comptroller, Auditor, Assistant Treasurer—registered CPA, with 11 years public accounting and utility supervisory experience covering gas production, transmission and distribution. Background of securities, registration, internal auditing, corporate taxes, federal and state regulations, budgets, and preparation of rate exhibits. B.S. in accounting and management. Age 36. Salary requirements \$12-14,000. Detailed resume on request. 1985.

CPA-Assistant Controller—of major utility. Ten years' supervisory, diversified experience in public utility department of nation-wide public accounting firm. Five years' responsible, private, major company experience. General accounting, auditing, taxes, budgets. Seeking position as chief accounting or financial officer or assistant thereto with future. Will relocate. Resume on request. 1986.

Management and/or Promotion—Nine years' experience in engineering, operations, and distribution with medium size natural gas utility (150,000 customers). Conscientious, reliable, and ambitious. Age 29, married, family. B.S. degree in the physical sciences. Prefer southeast or southwest location. Complete resume upon request. 1987.

Engineer—35 years old, with M.S. degree from Columbia University and 10 years' experience in Structural and Stress Analysis, would like an engineering position in New York City area. Will be available after July 18. 1988.

Mechanical Engineer—August, 1960 Ph.D. graduate of Oklahoma State University. Prime interest: heat transfer; also Thermodynamics or Fluid-dynamics. Resume and references furnished on request. Married, age 35, draft exempt. 1989.

Sales and/or Promotion Manager—background 30 years' experience in management, sales management, advertising, sales promotion and sales training at manufacturer and distributor levels in refrigeration, air conditioning—residential, commercial and industrial. Complete resume available upon request. 1990.

Marketing Research or Sales Administration—10 years, aggressive Southwest utility. Currently marketing research analyst. Previously administrative assistant to marketing director. Responsibilities handled: forecasting, analysis, budgeting, consumer-dealer surveys, sales promotions planning, extensive merchandising, accounting. Married, 31, relocate, \$10,000 minimum. 1991.

Public Relations Executive—Seven years in top level gas industry public relations activities. Extensive background in advertising and sales promotion. Recent activities included direction of creative publicity, special events, press conferences, community, government and employee relations, speech writing, preparation of brochures and booklets, direction of staff personnel, sales training. 1992.

Sales and Project Engineer—over 20 years' experience in the industrial and commercial use of gas, including application of near and far gas-fired infra-red equipment. Will relocate if necessary. Resume sent upon request. 1993.

POSITIONS OPEN

Distribution Engineer—well established, rapidly expanding Pacific northwest natural gas utility has opening for graduate engineer with minimum of five to eight years experience in gas distribution work including design, construction, corrosion control, load studies and network analysis. Prefer married man under 35. Send resume of education, experience and salary requirements. 0927.

Assistant Home Service Director—position open in midwest gas utility serving metropolitan area of 250,000. Department of five home economists. An excellent opportunity if looking for permanency. Ability to plan and give demonstrations essential. 0928.

Superintendent of Gas Measurement—natural gas distribution utility desires aggressive, experienced natural gas measurement man for

position of Superintendent, Gas Measurement Department. Responsible for repair, adjustment and testing of residential, commercial and industrial meters (some Roots-Connerville), regulators, pressure volume correctors, temperature compensators, etc., and supervise fabrication and installation of industrial meter settings. Send resume of experience and compensation, references. Location, Great Lakes area. 0929.

Commercial Gas Salesman—immediate openings for experienced commercial sales representatives in new and expanding natural gas company. Location offers vacationland climate to individuals qualified to develop restaurant, hotel and commercial fields. Excellent employee benefits program; starting salary depends on individual qualifications. Minimum of five years' experience necessary. Submit complete resume, starting salary, to J. G. Barnhart, Employee Relations Dept., The Houston Corp., P.O. Box 10400, St. Petersburg 31, Florida. 0930.

Manufacturer Representatives—now calling on the gas trade to add the finest gas lamp made to their line. Top commissions. Many areas available. 0931.

General Sales Manager—small gas utility in north central area, embarking on an extensive expansion program, needs sales manager to supervise division managers, organize gas sales and appliance sales programs. Experience in dealer promotion programs desirable. Send resume of education, experience and salary. 0932.

Heating and Air Conditioning Sales Engineer—for natural gas utility, located in western North Carolina. An excellent opportunity in a rapidly expanding growth area. Send complete resume. Replies held in confidence. 0934.

Gas Engineer—fast growing, progressive midwest natural gas utility, over 16,000 customers, seeks engineer with at least three or four years' gas utility operation experience for position in supervisory capacity. Approximately 30 years of age, technical background and experience in corrosion and cathodic protection, executive ability to supervise this type of work. Send full resume of experience, age and salary requirements. 0935.

Gas Engineer—Midwest gas utility seeks recent engineering graduate, limited experience, for position with opportunity to learn all phases of gas utility operations and engineering, eventually leading to supervisory position. Prefer man, about 25, interested in personal advancement. Send background, experience, references, and salary requirements. 0936.

Gas Engineer—unusual opportunity open for gas engineer interested in challenging position in gas industry. Must have ability to grow with increasing responsibilities. Several years' experience in gas utility operations or staff engineering work desirable. 0937.

Midland-Ross names Loughry manager foreign operations



Theodore F. Loughry

Ohio.

Mr. Loughry will have headquarters in Cleveland, Ohio, and will act on a corporate

THEODORE F. LOUGHRY, who served 36 years with the Surface Combustion Corporation, has been appointed to the newly created post of manager of foreign operations for Midland-Ross Corporation. Surface last year became the Surface Combustion division of Midland-Ross, located in Toledo,

level to coordinate all Midland-Ross' foreign activities. He will also coordinate the flow of technical information between foreign personnel and the corporation's divisions.

Mr. Loughry had been manager of foreign activities for Surface since 1951. Prior to that he was in charge of the gas production

division of the Surface sales department. He managed Surface's New York office for eight years before World War II.

A native of Elyria, Ohio, he attended high school there and was graduated from the Carnegie Institute of Technology, Pittsburgh, Pa., in 1924.

Cook becomes director in California

THE BOARD of directors of Pacific Gas and Electric Co., San Francisco, Calif., recently elected Ransom M. Cook a director.

Mr. Cook is president and chief executive officer and a member of the board of directors of Wells Fargo Bank American Trust Company, which was recently formed by the

merger of two firms. He succeeds as utility director the late Harris C. Kirk.

A native of Portland, Ore., Mr. Cook received his education at Oregon State College. His corporate directorships list, among others, Cutter Laboratories, Inc., and Reserve Oil and Gas Company.

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